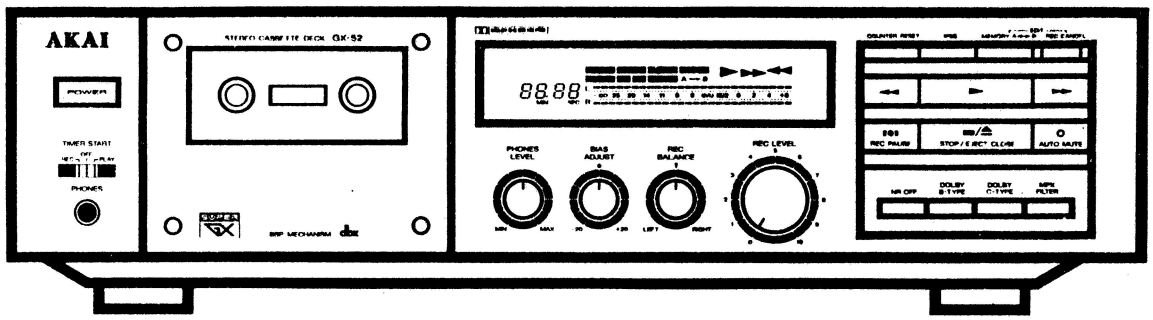
GX-52

AKAI SERVICE MANUAL



STEREO CASSETTE DECK

MODEL GX-52

SPECIFICATIONS

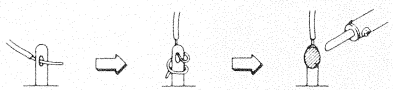
Track system	4 track 2 channel stereo
Heads	Twin field supper GX head for Recording and Playback x 1 Erase head x 1
Mortors	Direct drive EG servo motor for Capstan drive x 1 DC motor for reel drive x 1 DC motor for cam drive and Tape eject/loding x 1
Wow & flutter	0.027% WRMS (JIS), 0.045% (DIN)
S/N (Metal)	59dB (Measured via tape with 3% THD recording level) Dolby B type NR swich ON: Improves up to 5dB at 1KHz, 10dB above 5KHz Dolby C type NR swich ON: Improves up to 15dB at 500Hz, 10dB at 1KHz to 10KHz
T.H.D.	Less than 0.8%
Frequency response	
Normal	25Hz to 17,000Hz ±3dB
CrO_2	25Hz to 18,000Hz ±3dB
Metal	25Hz to 20,000Hz ±3dB
Input sensitivity/Impedance	
LINE IN	70mV/47kohms
Output sensitivity/Impedance	
LINE OUT	388mV/2.7kohms
Phones	1.3mW (8ohms)
Power requirements	120V, 60Hz for Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK 110/120/220/240/, 50Hz/60Hz convertible for other countries
Dimension	425(W) x 112(H) x 352(D)mm (16.7 x 4.4 x 13.9 inches)
Weight	6.5Kg (14.3lbs)

*For improvement purpose, specifications and desigh are subject to change without notice.
*Noise reduction manufactured under license from Dolby Laboratries Licensing Corporation.
"Dolby" and double-D symbol are trade marks of Dolby Laboratries Licensing Corporation.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, others parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replased only with specified replacement.
   Examples: RF cables, noise blocking capacitors, noise blocking filters, etc..
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation Seets for transistors
   5) Plastic Screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatskins, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repared locations.
9. Use care that foreign objects (screws, solder droplets, ect.) do not remain inside that set.

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10M ohms. but for equipment with external antenna terminals (tuner, reciever, etc. and is intend for [C] or [A], specified insulation resistance should be headphone jacks line in out jacks etc. more than 2.2M ohms (ground terminals, microphone jacks).

★INFORMATION

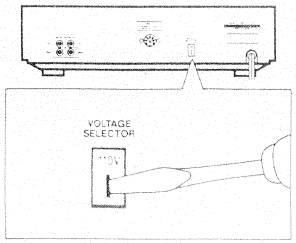
SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbols	Pricipal Destinations
[A]	USA
[B]	UK
[C]	Canada
[E]	Eurlop (except UK)
[J]	Japan
[S]	Australia
[V]	W. Germany only
[U]	Universal Area
[Y]	Custom version

VOLTAGE CONVERSION([U] Model only)

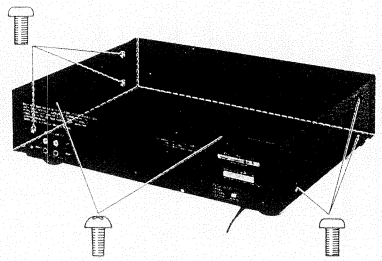
Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel with a screwdriver so that the correct voltage is indicated.



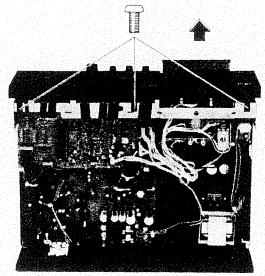
I. DISASSEMBLY

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs.
Reassemble in reverse order.

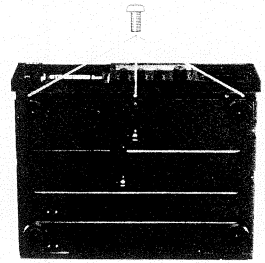
1. REMOVAL OF UPPER COVER



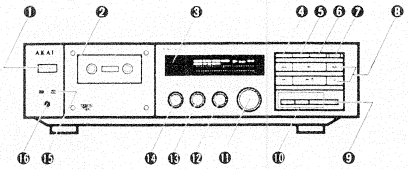
2. REMOVAL OF FRONT COVER



* Remove the cassette lid first then remove the front panel. (Turn on the Power and depress the eject button.)



II. CONTROLS



❶ **POWER Switch**
To turn ON and OFF the power.

❷ **Cassette lid and cassette holder (Power assisted)**
Load a cassette tape here. To open, press the ■/≜ button. To close, press once again.
Do not manually open this cassette holder, as it may damage your equipment.

❸ **FL (Fluorescent) Display**
Tells you what the cassette deck is doing.

❹ **COUNTER RESET button**
To reset the digital counter to "00.00".

❺ **IPSS buttton**
To select playback with the IPSS system.

❻ **A ⟷ B MEMORY button**
For memorization of a selection(s) or part of a selection that you wish to hear repeatedly. Also used with the recording cancel system for erasure of unwanted parts.

❼ **REC CANCEL button**
To cancel recording and rewind tape to the first detectable blank space of tape. Convenient for re-recording a section of tape.

❽ **Operating buttons**
For playback and recording operations.
Press the (■/≜) button to open and close the cassette holder.

❾ **MPX (Multiplex) FILTER switch**
To turn on and off the multiplex filter.

❿ **Noise reduction selector (NR OFF, DOLBY B and DOLBY C)**
To select noise reduction for recording and playback purposes.

⓫ **REC LEVEL control**
To set recording levels. The level adjustment is the same amount for both right and left channels.

⓬ **REC BALANCE control**
To set the left and right channel balance of recording input levels.

⓭ **BIAS ADJUST control**
To set the recording bias current. The bias adjustment range is between −20% and +20% of the proper bias current of each tape position. If using a reference tape recommended for use with Akai cassette decks, set this control to the center click "0" position.

⓮ **PHONES Level control**
To adjust the output level of the PHONES jack.

⓯ **TIMER START Switch**
For absentee recording and timed playback.

⓰ **PHONES jack**
To listen through a pair of headphones, connect them to this jack.

III. PRINCIPAL PARTS LOCATION

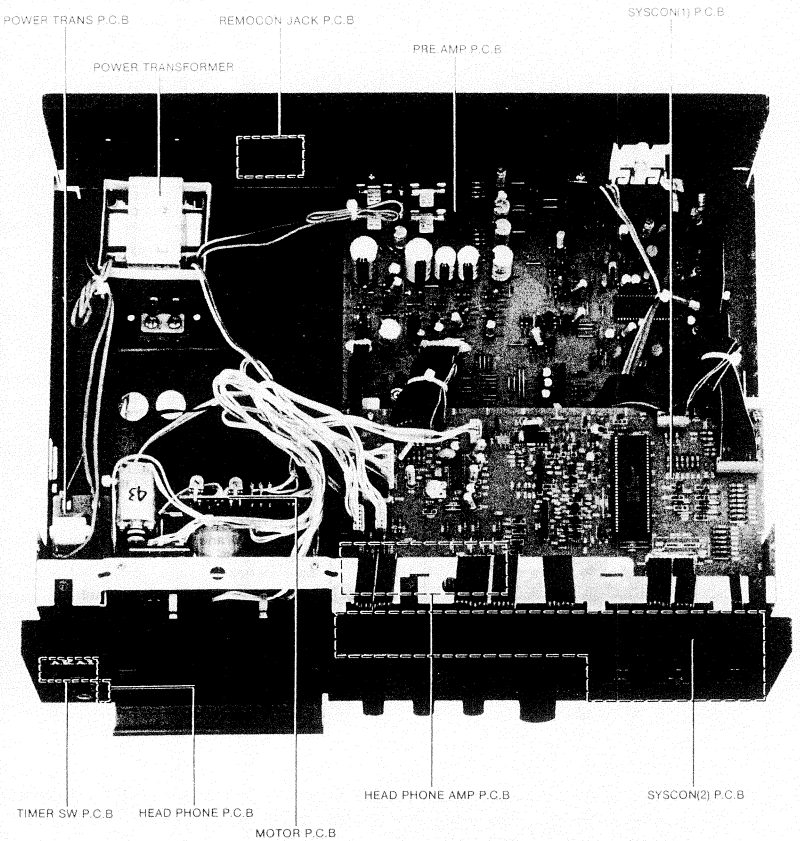


Fig.3-1. Top View

IV. MECHANICAL ADJUSTMENT

4-1. PINCH ROLLER PRESSURE MEASUREMENT(Refer to Fig.4-1)

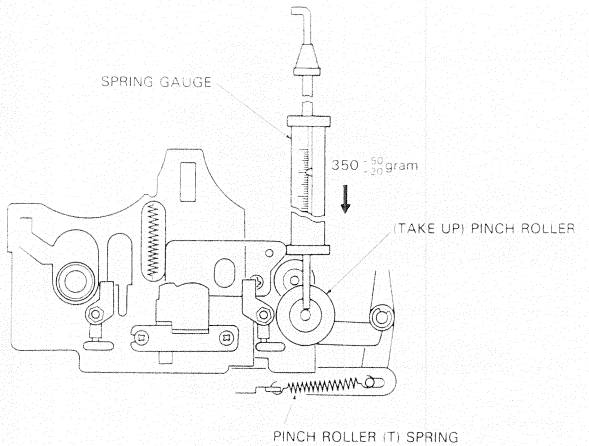


Fig.4-1.

Put in PLAY mode. push pinch roller arm down with the spring gauge push the pinch roller 1 or 2 mm from the capstan and release slowly. Read the spring gauge at the moment the pinch roller touches the capstan and begins to rotate.

Specified pressure: 350 $^{+50}_{-20}$ gram (Take up)

If there is no measurement obtained, replace the pinch roller spring.

4-2. WINDING TORQUE MEASUREMENT IN EACH MODE(Refer to Fig.4-2)

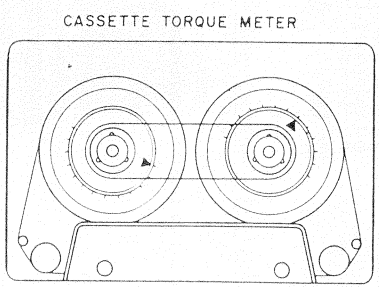


Fig.4-2.

Insert a cassette torque meter (AJ-751197) and measure in each mode. For First Forward and Rewind, measure at the end of the tape has stopped running.

PLAY mode
Take up Torque : 40 $^{+20}_{-10}$ g-cm
Back Tension Torque : 10 $^{+10}_{-0}$ g-cm

FIRST FORWARD, REWIND mode
Take up Torque : 120 $^{+130}_{-50}$ g-cm

4-3 HOW TO INSTALL VOLUME (VR901) AND CAM WHEEL

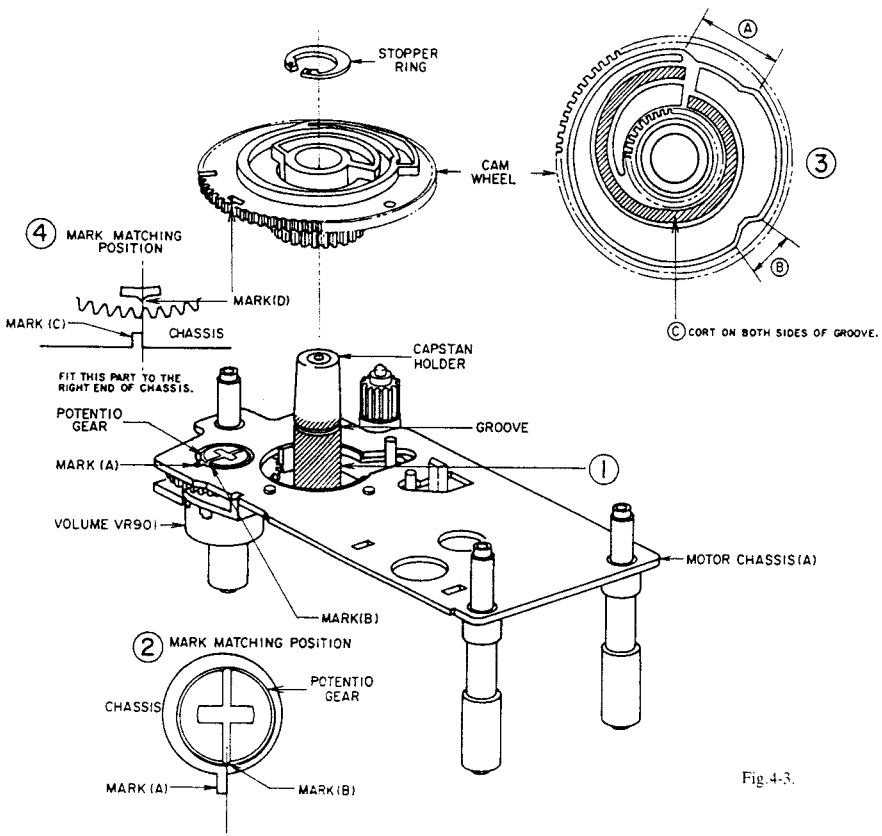


Fig.4-3.

1) Apply Molybdenum coat on the capstan holder
   Apply Molybdenum coat on the area of 360° from the bottom to the upside 2mm of froove as shown in the figure. (Fig.4-3-①)
2) Fitting position volume (potentio gear)
   Fit the right end of Mark (A) to the center of Mark (B) as shown in the figuer. (Fig. 4-3-②)
3) Apply Molybdenum coat on the Ⓐ, Ⓑ and Ⓒ shown in the Fig.4-3-③
4) Set the cam wheel on the capstan wheel (ensure that the cam wheel and potentio gear are meshed properly).
   When the cam wheel is set properly, fit the center of Mark (D) to the right end of Mark (C). (Fig.4-3-④)
5) Fit the stopper ring in the groove of the capstan holder.

CAUTIONS:

1. Make sure that the teeth on the periphery of cam wheel and the cam are absolutely free from any scratch, cut, etc.
2. Make sure that Molybdenum coat is applied on the specified area only.

4-4. POTENTIOMETER PRESET VOLTAGE ADJUSTMENT(Refer to fig.4-4 to 4-5)

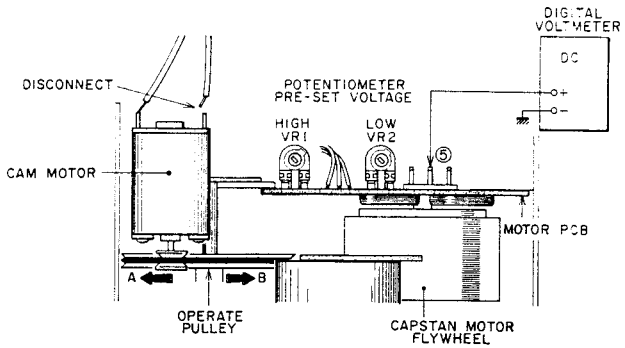


Fig.4-4.

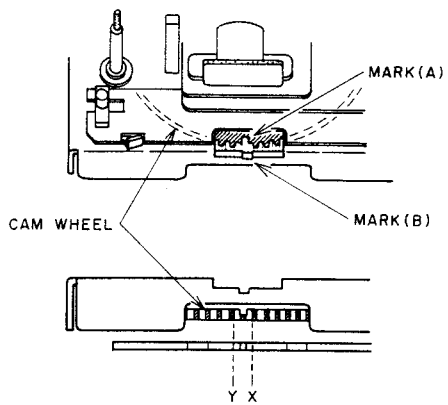


Fig.4-5.

1) LOW VOLTAGE ADJUSTMENT
   a. With power OFF, remove the connecting cord of the cam motor and turn the operate pulley fully with your fingers in A direction. (EJECT DIRESTION)
   b. Connect the digital voltmeter as shown in fig.4-4.
   c. With power ON, adjust VR2 so that the voltage reading will be 1.15V (DC).
2) HIGH VOLTAGE ADJISTMENT
   a. With power OFF, turn the operate pulley fully with your fings in B direction. (PLAY DIRECTION)
   b. With power ON, adjust VR1 so that voltage reading will be 9.08V (DC).
3) Repeart Items 1) and 2).
4) a. With power OFF, connect the connecting cord of the motor.
   b. Remove the digital voltmeter.
5) Remove the Cassette lid. Front panel and Bottom cover.
6) a. Set power to ON.
   b. Adjust VR1 slightly so that the center of Marker (A) coincides with the center of Marker (B) (should be within the range between X and Y) at STOP Mode as shown en Fig. 4-5. (The marker (STOP) on the CAM WHEEL can be seen clearly by lightinhg it from the back.)
   c. Set the IPLS switch to ON.
   d. Confirm that head and pinch rollers do not move up and down when the FF and REW switches are alternately depressed.
   e. Tun the reel with fingers en STOP Mode to check that the brake works sufficiently.
   When the brake acts normally,the take-up reel does not turn clockwise while the supply reel does not rotate counterclockwise.

V. HEAD ADJUSTMENT

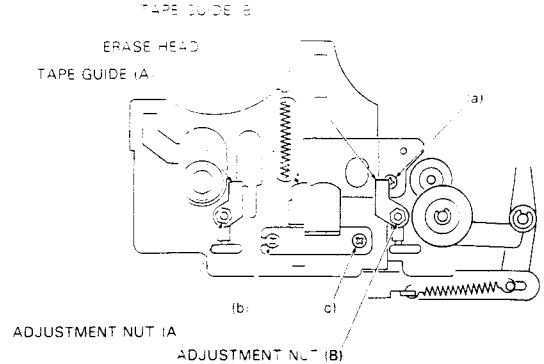


Fig.5-1.

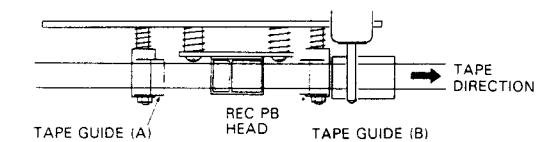


Fig.5-2.

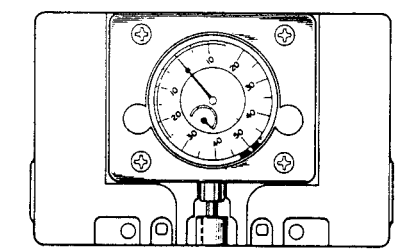


Fig. 5-3 Cassette Head Projection Gauge (AJ-751180)

5-1. REC/PB HEAD PROJECTION ADJUSTMENT
Take off the LID CASE and set the cassette head projection gauge(AJ 751180) and set to PLAY mode. Loosen the screw (a) and adjust so that the gauge indication at that time will be 3.2 + 0.1mm. After adjustment, apply paintlock on the screw (a).

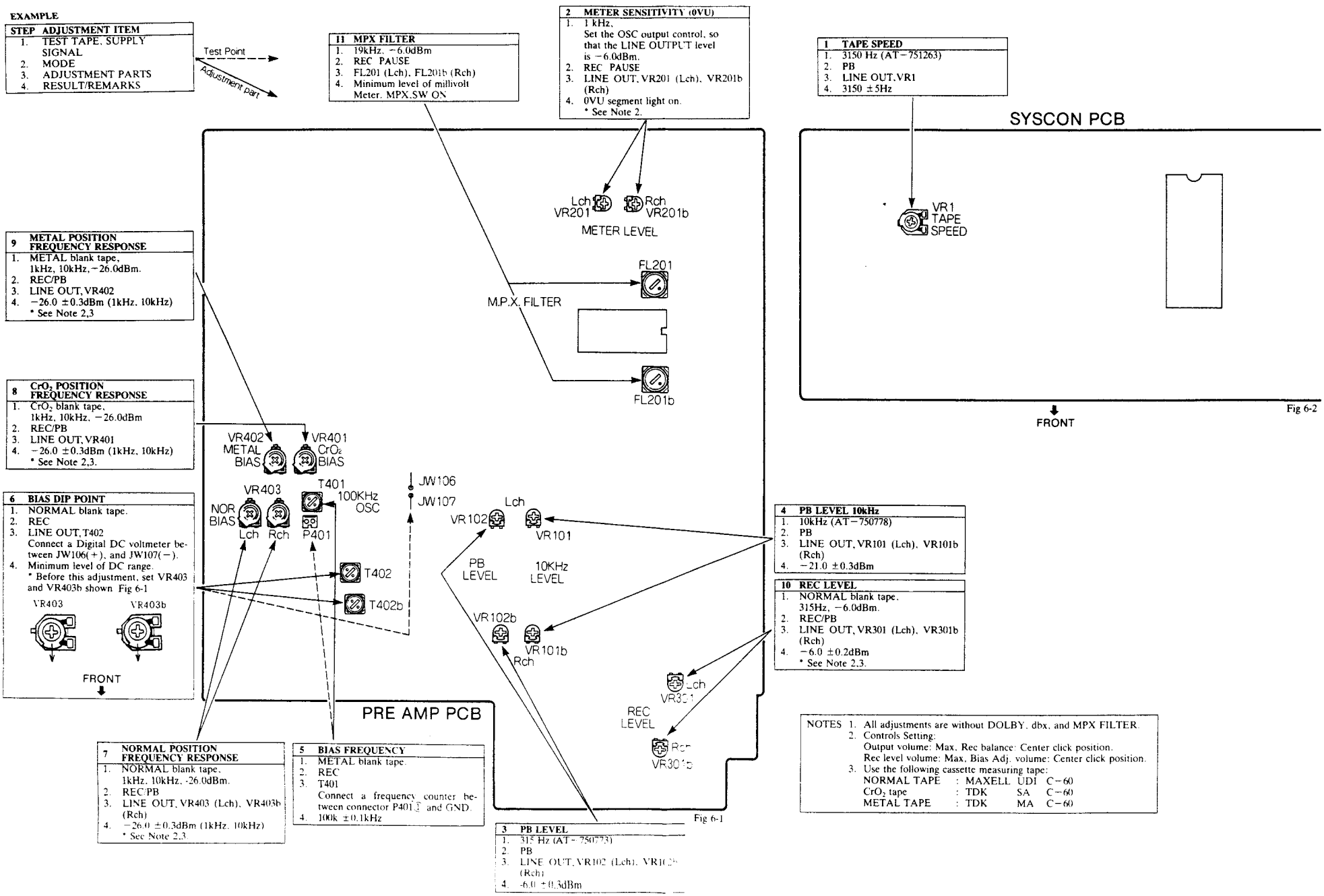
5-2. TAPE GUIDE HEIGHT ADJUSTMENT
1) Set the mirror cassette tape (AJ-751178) and set to PLAY mode.
2) Adjust the tape guide (A) so that the parts of the erase head coming out of both sides of the tape (A and A) in Fig. 5-2 will be equal.For the adjustment, use the adjustment nut (A).
3) Adjust the tape guide (B) so that the tape runs smoothly and is not hitched by the tape guide. For the adjustment, use the adjustment nut (B).
4) After adjustment, paint-lock the adjustment nuts (A) and (B).

5-3.REC/PB HEAD HEIGHT ADJUSTMENT
1) Set the mirror cassette tape and set to PLAY mode.
2) Adjust the screws (b), (c) and (d) so that the upper edge of REC/PB head Lch core and the upper side of the tape is in alignment.
3) Playback the head height adjustment tape (4 Track 1,000Hz) (AT-750775), and fine-adjust the screw (b), (c) and (d) so that the largest output is obtained for both channels.

5-4. REC/PB HEAD AZIMUTH ALIGNMENT ADJUSTMENT
1) Playback a 10kHz Head Azimuth Alignment Tape (AT-750778) and adjust the screw (d) until the output levels of both channels are at maximum.
2) Record a 10kHz, -26dBm signal from the audio frequency oscillator.
3) Rewind and check for any fluctuation in the output level at playback.
4) After adjustment, paintlock the screws (b), (c) and (d).

NOTES:
1. Be sure to clean the heads prior to head adjustment.
2. Be careful not to use a magnetized driver or other magnetized tools in the vicinity of the heads.
3. Be sure to demagnetize the heads with a Head Demagnetizer before and after head adjustment.

VI. PRE AMP, SYSCON and dbx PCB ADJUSTMENT



VII. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20×03STL CMT
2-4	ZS-536488	BID20×08STL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

A small "x" indicates that this part is not shown in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure.

This number corresponds with the Figure Number.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A]: AAL(U.S.A.) [S]: SAA(Australia)
[B]: BEAB(England) [U]: U/T(Universal Area)
[C]: CSA(Canada) [V]: VDE(W. Germany)
[E]: CEE(Europe) [Y]: Custom Version
[J]: JPN(Japan)

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

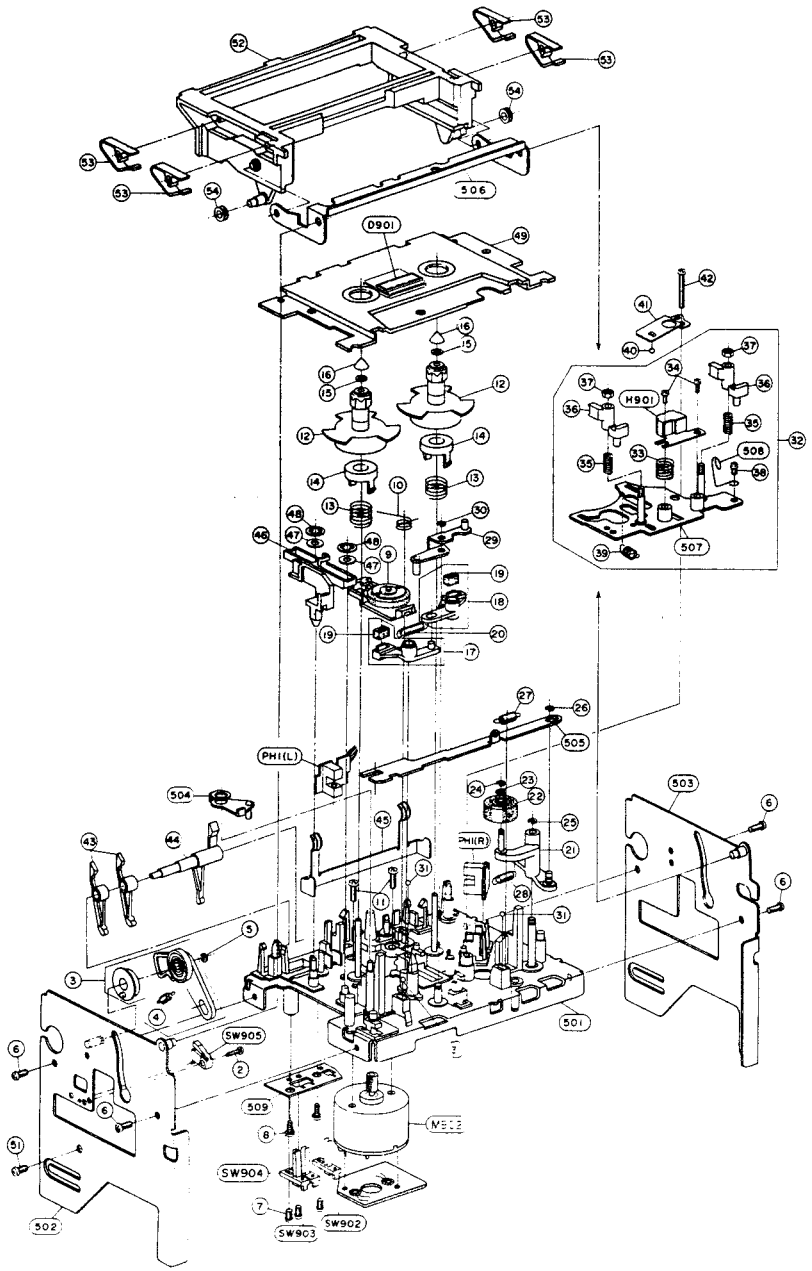
⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

Ref. No.	Part No.	Description
1	BB-T2100A020A	MECHA BLK GX-52
2	BH-T2100A030A	HEAD BLK GX-52
3	BM-M3103A010A	MOTOR BLM-300 [CAPSTAN MOTOR]
4	BM-B345196	MOTOR OPERATION PULLEY(A) PART [CAM MOTOR]
5	BR-T2069A360A	REEL TABLE BLK GX-9
6	*BT-373395	TRANS POWER T2100(A,C) [A,C]
7	*BT-373398	TRANS POWER T2100(B,S) [B,S]
8	*BT-373396	TRANS POWER T2100(E,V) [E,V]
9	*BT-373394	TRANS POWER T2100(U) [U]
10	ED-307572	D SILICON H 1SS131
11	ED-624903	D SILICON H 1S2473
12	*ED-330622	D SILICON 1SR35-100VL 100 1.0A
13	ED-316389	D ZENER H HZ11 A2
14	ED-324014	D ZENER H HZ11 B1
15	ED-346550	D ZENER H HZ11L B2
16	ED-338561	D ZENER H HZ2FA B2 F10
17	ED-324013	D ZENER H HZ2O 2
18	ED-346624	D ZENER H HZ3Q 2
19	ED-306010	D ZENER H HZ6 A2
20	ED-309069	D ZENER H HZ6 B2
21	ED-346604	D ZENER H HZ7 B2
22	ED-346609	D ZENER H HZ9 C1
23	ED-346538	D ZENER H HZ9L A2
24	ED-346540	D ZENER H HZ9L B1
25	*EF-355374	FUSE BET T 250V 500MA [B]
26	*EF-358974	FUSE BET T 250V 630MA [B]
27	*EF-593706	FUSE SEMKO T 250V 500MA [E]
28	*EF-601942	FUSE SEMKO T 250V 630MA [E]
29	*EF-306949	FUSE TSC A 250V 1.25A [U]
30	*EF-309388	FUSE TSC A 250V 800MA [U]
31	*EF-309392	FUSE TSC 125V 1.25A [C]
32	*EF-309391	FUSE TSC 125V 800MA [C]
33	EH-372101	FILTER DB 42B-5162-04
34	EI-337568	HOLE-E DHD-H070
35	EI-359985	IC CX20187
36	EI-356327	IC HA12067NT
37	EI-337013	IC LB1290
38	EI-345765	IC LB1292
39	EI-355602	IC LB1649
40	EI-373379	IC M50743-600SP T2100 CUSTOM
41	EI-357498	IC M51143AL
42	EI-353227	IC M5216L
43	EI-346071	IC M5218L-21
44	EI-348785	IC M5220L
45	EI-201940	IC NJM4558S
46	EI-336992	IC UPC1043C
47	EI-373383	IC UPC1297CA
48	EI-372031	OSC CE W.'C FCR8.0MC 8.0MHZ
49	EM-373136	IND FL FIP26A W15Y
50	EQ-328529	RELAY LEAD LAB2NS 2NO 12V
51	*ER-367642	R FUSE H S10 ERD2FC 1 4W 1200G
52	*ER-200926	R FUSE H S10 ERD2FC 1 4W 27R0G
53	*ER-200972	R FUSE H S10 ERD2FC 1 4W 33R0G
54	ER-358910	R OMF H S15 FS 2W 181J
55	ES-336990	SW LEAF BSW-169 01-1 NO [CRO2 METAL]
56	ES-372912	SW LEAF SPPB21 01-2 [LOADING SW]
57	ES-373380	SW PUSH ESE-58630 4 THROW N [NR SW]
58	*ES-371104	SW PUSH SDDLD1082A 01-1 [POWER SW]
59	*ES-359606	SW SELECTOR BT-41S0454 01-4 [U] [VOLTAGE SELECTOR]
60	ES-370965	SW SLIDE SSSU02 1-01-03N [TIMER START SW]
61	ES-373381	SW TACT SKHHPP
62	ET-345091	DETECTOR SPI-201-40 B.C [DETECTOR-R PCB]
63	ET-373382	TR DTA143ZS
64	ET-372030	TR DTA144EF
65	ET-354415	TR DTA144ES
66	ET-353897	TR DTC114ES
67	ET-354365	TR DTC114YS
68	ET-373485	TR DTC123JS
69	ET-373392	TR DTC124XS
70	ET-373391	TR DTC143ZS
71	ET-360824	TR DTC144EF
72	ET-354414	TR DTC144ES
73	ET-370310	TR DTC144TS
74	ET-308472	TR 2SA1115 E,F,G F05
75	*ET-354841	TR 2SA1282A F,G F05
76	*ET-352726	TR 2SA1392 T,U
77	ET-337760	TR 2SA984K F
78	ET-308977	TR 2SC2274K F F05
79	ET-308141	TR 2SC2603 G F05
80	*ET-365394	TR 2SC3242A E,F,G F05
81	*ET-357845	TR 2SC3242A F,G F05
82	ET-349081	TR 2SC3383 S,T
83	ET-347961	TR 2SD1012-V G F05
84	*ET-354083	TR 2SD1189 Q,R
85	EV-373389	VR ROTARY RK1631110 B102 [BIAS ADJUST]
86	EV-373387	VR ROTARY RK16312A0 A104X2 [REC LEVEL]
87	EV-373388	VR ROTARY RK16312A0 A104X2 [PHONES LEVEL]
88	EV-373385	VR ROTARY RK1631210 M104 N104 [REC BALANCE]
89	HR-H2505A010A	HEAD COMB EPR4-13TG
90	MP-346329	PINCH ROLLER(C)
91	TC-336605	WIND IDLER ASSY

MECHA BLOCK

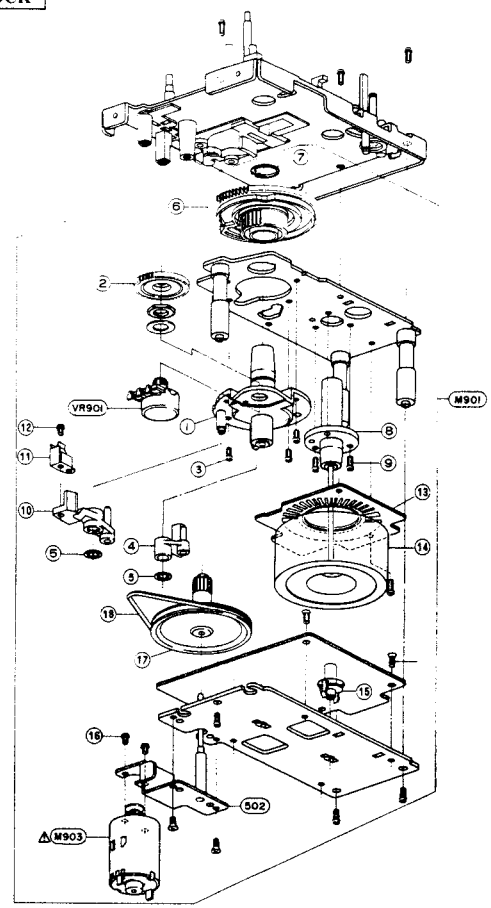


2. MECHA BLOCK

Ref. No.	Part No.	Description
1	BB-T2100A020A	MECHA BLK GX-52
2	ZS-608106	PAN20X06STL CMT
3	BZ-T2030A110C	OIL CLUTCH BLK GX-6
4	ZG-341970	SP PULL OIL CLUTCH
5	ZW-270088	RING E190SUP CMT
6	ZS-201275	ST PAN26X06STL CMT
SW905	ES-372912	SW LEAF SPPB21 01-2 [LOADING SW]
PH1(R)	ET-345091	DETECTOR SPI-201-40 B,C [DETECTOR-R PCB]
PH1(L)	ET-345091	DETECTOR SPI-201-40 B,C [DETECTOR-L PCB]
SW902	ES-336990	SW LEAF BSW-169 01-1 NO [CRO2/METAL]
SW903	ES-336990	SW LEAF BSW-169 01-1 NO [120U/70U]
SW904	ES-336990	SW LEAF BSW-169 01-1 NO [ANTI REC]
7	ZS-464703	BID20X04STL CMT
8	ZS-336614	PT PAN26X08STL CMT
9	TC-336605	WIND IDLER ASSY
10	ZG-336140	SP TORSION IDLER
M902	BM-B336989	MOTOR REEL (PULLEY) PART [REEL MOTOR]
11	ZS-550708	PAN26X08STL NI3
12	BR-T2069A360A	REEL TABLE BLK GX-9
13	ZG-336141	SP PUSH BT
14	TC-336142	HOLDER BT SP
15	ZW-330073	PW21X040X020 TOUGH LIGHT NO440
16	MT-305793	REEL CAP
17	BL-T2030A160A	LEVER BRAKE (A) BLK GX-F51
18	BL-T2030A170A	LEVER BRAKE (B) BLK GX-F51
19	TC-336146	BRAKE RUBBER
20	ZG-312946	SP T1-03.2/0.29-16.0 T1-062
21	BL-B336150	ARM PINCH ROLLER (A) PART
22	MP-346329	PINCH ROLLER(C)
23	ZW-305546	PW21X040X025PSL
24	ZW-356657	RING E150SUP CMT
25	ZW-270088	RING E190SUP CMT
26	ZW-270088	RING E190SUP CMT
27	ZG-342575	SP PULL PINCH ROLLER (T-2)
28	ZG-321534	SP T2-03.2/0.29-12.5 T2-060
29	BL-B336155	ARM HEAD SLIDE PART
30	ZW-270088	RING E190SUP CMT
31	MV-357208	BALL 200STL
32	BH-T2100A030A	HEAD BLK GX-52
33	ZG-373323	SP PUSH HEAD
H901	HR-H2505A010A	HEAD COMB EPR4-13TG
34	ZS-201508	PAN20X04STL NI3
35	ZG-336130B	SP PUSH GUIDE B
36	HZ-336129	GUIDE TAPE
37	ZW-373137	N20STL BNI 1
38	ZS-391386	PAN23X03STL NI3
39	ZG-341972	SP PULL HEAD RETURN
40	MV-357208	BALL 200STL
41	ZG-336157	SP PLATE HEAD HOLD
42	ZS-308931	PAN26X18STL CMT
43	ML-336158	LEVER DETECTION (B)
44	ML-336159-A	LEVER DETECTOR(A)
45	ZG-336160	SP PLATE CASSETTE HOLDER (A)
46	TC-336161	SLIDE EJECT
47	ZW-306464	PW31X070X050STL CMT
48	ZW-329422	RING CS 0300
49	SP-336162B-A	LID DECORATION (B)
D901	ED-344244	D LED SLF-601C AMBER [HOUSING LAMP PCB]
50	ZS-479474	PAN26X05STL CMT
51	ZS-201275	ST PAN26X06STL CMT
52	SP-336163B	LID CASE(2)
53	ZG-336615	SP PLATE CASSETTE HOLDER (B)
54	SZ-336166	COLLAR LID

NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.

MOTOR BLM310B BLOCK



3. MOTOR BLM-300 BLOCK

Ref. No.	Part No.	Description
M901	BM-M3103A010A	MOTOR BLM-300 [CAPSTAN MOTOR]
1	TC-3360048	HOLDER CAPSTAN (C-2)
VR901	EV-337052	VR ROTARY 16L10XOR B103
2	MZ-336005	GEAR POTENTION
3	ZS-432843	PAN26X04STL CMT
4	BL-B336007	LEVER BRAKE CAM PART
5	ZW-653163	RING CS 280STL PKR
6	MZ-336006	CAM WHEEL
7	ZW-336604	RETAINING RING O S930SUP ACP
8	TC-336002	HOLDER CAPSTAN (B)
9	ZS-479474	PAN26X05STL CMT
10	BL-B336009	LEVER EJECT CAM PART
11	MZ-353158	SP PLATE EJECT
12	ZS-477876	PAN20X03STL CMT
13	EA-336012	PC FG
14	BF-B336013	FLYWHEEL PART
15	TC-336016	HOLDER THRUST (A)
M903	BM-B345196	MOTOR OPERATION (PULLEY) PART [CAM MOTOR]
16	ZS-592378	PAN26X03STL CMT
17	MR-336019	PULLEY OPERATE
18	MB-336021	BELT OPERATION

NOTE: The parts reference numbered here except the ones in 500's are normally stocked for replacement purpose. The rest of the parts shown in this manual are not stocked since they are seldom required for routine service.

4. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-T2100A040A	PC(#) PRE AMP BLK GX-52(U) (U)
1B	BA-T2100A040B	PC(#) PRE AMP BLK GX-52(C,E,B) (B,C,E)
2	BA-T2100A050A	PC(#) SYSCON BLK GX-52

PC PRE-AMP BLK CONSISTS OF FOLLOWING P.C.BOARD.

- PRE-AMP P.C.BOARD
- HEADPHONE AMP P.C.BOARD
- POWER TRANS P.C.BOARD
- HEADPHONE P.C.BOARD

PC SYSCON BLK CONSISTS OF FOLLOWING P.C.BOARD.

- SYSTEM CONTROL(1)P.C.BOARD
- SYSTEM CONTROL(2)P.C.BOARD
- TIMER SW P.C.BOARD
- REMOCON JACK P.C.BOARD

5. PRE-AMP P.C BOARD

Ref. No.	Part No.	Description
D101	ED-624903	D SILICON H 1S2473
D501	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D502	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D503	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D504	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D505	ED-624903	D SILICON H 1S2473
D506	ED-373390	D LED LTZ-R15 RED F10
D507	ED-346540	D ZENER H HZ9L B1
D508	ED-624903	D SILICON H 1S2473
D509	ED-373390	D LED LTZ-R15 RED F10
D510	ED-346540	D ZENER H HZ9L B1
D511	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D512	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D513	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D514	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D515	ED-624903	D SILICON H 1S2473
D516	ED-346550	D ZENER H HZ11L B2
D517	ED-624903	D SILICON H 1S2473
D518	ED-346550	D ZENER H HZ11L B2
D519	ED-346538	D ZENER H HZ9L A2
D520	ED-346538	D ZENER H HZ9L A2
D521	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D522	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D523	ED-324014	D ZENER H HZ11 B1
D541	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D542	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D543	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D544	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D552	ED-324014	D ZENER H HZ11 B1
D553	ED-324014	D ZENER H HZ11 B1
D554	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D555	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D556	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D557	ED-306010	D ZENER H HZ6 A2
D558	ED-309069	D ZENER H HZ6 B2
D559	ED-624903	D SILICON H 1S2473
D560	ED-346624	D ZENER H HZ30 2
D561	ED-324013	D ZENER H HZ20 2
D562	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D563	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D564	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D565	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D566	*ED-330622	D SILICON 1SR35-100VL 100/1.0A
D601	ED-624903	D SILICON H 1S2473
D602	ED-624903	D SILICON H 1S2473
FL101	EH-368105	FILTER EMI STY103NB
FL201	EH-372101	FILTER DB 42B-5162-04
FL202	EO-323982	COIL TUN 1 100Z-431 100.00KHZ
FL203	EH-368105	FILTER EMI STY103NB
FL204	EH-368105	FILTER EMI STY103NB
FL205	EH-368105	FILTER EMI STY103NB
FR401	*ER-200972	R FUSE H S10 ERD2FC 1/4W 33R0G
FR501	*ER-200926	R FUSE H S10 ERD2FC 1/4W 27R0G
FR502	*ER-367642	R FUSE H S10 ERD2FC 1/4W 1200G
IC101	EI-348785	IC M5220L
IC201	EI-359985	IC CX20187
IC301	EI-346071	IC M5218L-21
IC401	EI-373383	IC UPC1297CA
IC601	EI-357498	IC M51143AL
J601	EJ-336905	PIN J AJC-035-ACB P 4P (LINE IN/OUT)
L201	EO-372996	COIL FIX 1 RC875 223J
L301	EO-357050	COIL FIX 1 RC875 822J
L302	EO-369999	COIL FIX 1 79-5249-13 542J
RL101	EQ-328529	RELAY LEAD LAB2NS 2NO 12V
TR101	ET-349081	TR 2SC3383 S,T
TR102	ET-349081	TR 2SC3383 S,T
TR103	ET-349081	TR 2SC3383 S,T
TR104	ET-373485	TR DTC123JS
TR105	ET-354365	TR DTC114YS
TR106	ET-354365	TR DTC114YS
TR201	ET-349081	TR 2SC3383 S,T
TR202	ET-349081	TR 2SC3383 S,T
TR203	ET-349081	TR 2SC3383 S,T
TR301	ET-349081	TR 2SC3383 S,T
TR302	ET-349081	TR 2SC3383 S,T
TR303	ET-349081	TR 2SC3383 S,T
TR304	ET-349081	TR 2SC3383 S,T
TR305	ET-349081	TR 2SC3383 S,T
TR306	ET-349081	TR 2SC3383 S,T
TR307	ET-349081	TR 2SC3383 S,T
TR401	*ET-357845	TR 2SC3242A F,G F05
TR402	ET-373391	TR DTC143ZS
TR403	ET-370310	TR DTC144TS
TR404	ET-370310	TR DTC144TS
TR405	ET-308977	TR 2SC2274K F F05
TR406	ET-308977	TR 2SC2274K F F05
TR407	ET-308472	TR 2SA1115 E,F,G F05
TR408	ET-373392	TR DTC124XS
TR409	ET-370310	TR DTC144TS
TR410	ET-370310	TR DTC144TS
TR411	ET-354415	TR DTA144ES
TR513	ET-308141	TR 2SC2603 G F05
TR501	*ET-349081	TR 2SC3383 S,T
TR502	ET-352726	TR 2SA1392 T,U
TR503	*ET-352726	TR 2SA1392 T,U
TR504	ET-349081	TR 2SC3383 S,T
TR505	*ET-349081	TR 2SC3383 S,T
TR506	*ET-349081	TR 2SC3383 S,T
TR507	*ET-349081	TR 2SC3383 S,T
TR508	*ET-352726	TR 2SA1392 T,U
TR509	*ET-352726	TR 2SA1392 T,U
TR510	*ET-352726	TR 2SA1392 T,U
TR511	*ET-357845	TR 2SC3242A F,G F05
TR551	*ET-357845	TR 2SC3242A F,G F05
TR552	*ET-354841	TR 2SA1282A F,G F05
TR553	*ET-354083	TR 2SD1189 Q,R
TR554	*ET-308141	TR 2SC2603 G F05
TR555	*ET-308472	TR 2SA1115 E,F,G F05
TR556	*ET-308141	TR 2SC2603 G F05
TR557	*ET-365394	TR 2SC3242A E,F,G F05
TR601	ET-354415	TR DTA144ES
TR602	ET-354415	TR DTA144ES
TR603	ET-354415	TR DTA144ES
T401	EO-373384	COIL OSC 1 23D6-01 100.0KHZ
T402	EO-373483	COIL OSC 1 23D6-02 100.0KHZ
VR101	EV-356582	R S-FIX H RH0615C 0.10W 473
VR102	EV-356577	R S-FIX H RH0615C 0.10W 103
VR201	EV-357619	R S-FIX H RH0615C 0.10W 104
VR301	EV-357619	R S-FIX H RH0615C 0.10W 104
VR401	EV-345781	R S-FIX H RVF8P01 0.10W 202
VR402	EV-337996	R S-FIX H RVF8P01 0.10W 104
VR403	EV-337996	R S-FIX H RVF8P01 0.10W 104
F1A	*EF-309388	FUSE TSC A 250V 800MA (U)
F2A	*EF-309388	FUSE TSC A 250V 800MA (U)
F3A	*EF-306949	FUSE TSC A 250V 1.25A (U)
F4A	*EF-306949	FUSE TSC A 250V 1.25A (U)
F1B	*EF-309391	FUSE TSC 125V 800MA (C)
F2B	*EF-309391	FUSE TSC 125V 800MA (C)
F3B	*EF-309392	FUSE TSC 125V 1.25A (C)
F4B	*EF-309392	FUSE TSC 125V 1.25A (C)
F1C	*EF-593706	FUSE SEMKO T 250V 500MA (E)
F2C	*EF-593706	FUSE SEMKO T 250V 500MA (E)
F3C	*EF-601942	FUSE SEMKO T 250V 630MA (E)
F4C	*EF-601942	FUSE SEMKO T 250V 630MA (E)
F1D	*EF-355374	FUSE BET T 250V 500MA (B)
F2D	*EF-355374	FUSE BET T 250V 500MA (B)
F3D	*EF-358974	FUSE BET T 250V 630MA (B)
F4D	*EF-358974	FUSE BET T 250V 630MA (B)

6. HEADPHONE AMP P.C BOARD

Ref. No.	Part No.	Description
IC701	EI-353227	IC M5216L
IC705	ER-358910	R OMF H S15 FS 2W 181J
IC706	ER-358910	R OMF H S15 FS 2W 181J
VR701	EV-373387	VR ROTARY RK16312A0 A104X2 (REC LEVEL)
VR702	EV-373385	VR ROTARY RK1631210 M104 N104 (REC BALANCE)
VR703	EV-373388	VR ROTARY RK16312A0 A104X2 (PHONES LEVEL)
VR704	EV-373389	VR ROTARY RK1631110 B102 (BIAS ADJUST)

7. POWER TRANS P.C BOARD

Ref. No.	Part No.	Description
C801A	*EC-320548	C CE V F 103Z 250AC (U)
C801B	*EC-338411	C CE V FZ 103P 400AC (C,B,E)
FL801	EO-368465	COIL LF LF4N
SW801	*ES-371104	SW PUSH SDDLD1082A 01-1 (POWER SW)

8. HEADPHONE P.C BOARD

Ref. No.	Part No.	Description
J701	EJ-369995	PHONE J 3P HLJ0540-410 GP 6.3 (PHONES

9. SYSTEM CONTROL (1) P.C BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-307572	D SILICON H 1SS131
D6	ED-346593	D ZENER H HZ3 B1
D7	ED-338332	D ZENER H HZ4 A2
D8	ED-316389	D ZENER H HZ11 A2
D9	ED-346609	D ZENER H HZ9 C1
D10	ED-307572	D SILICON H 1SS131
D11	ED-348604	D ZENER H HZ7 B2
D12	ED-307572	D SILICON H 1SS131
D13	ED-307572	D SILICON H 1SS131
D14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-307572	D SILICON H 1SS131
D18	ED-307572	D SILICON H 1SS131
IC1	EI-373379	IC M50743-600SP T2100 CUSTOM
IC2	EI-336992	IC UPC1043C
IC3	EI-346071	IC M5218L-21
IC4	EI-346071	IC M5218L-21
IC5	EI-355602	IC LB1649
TR1	ET-354414	TR DTC144ES
TR2	ET-354414	TR DTC144ES
TR3	ET-353897	TR DTC114ES
TR4	ET-353897	TR DTC114ES
TR5	ET-353897	TR DTC114ES
TR6	ET-353897	TR DTC114ES
TR7	ET-353897	TR DTC114ES
TR8	ET-353897	TR DTC114ES
TR9	ET-353897	TR DTC114ES
TR10	ET-353897	TR DTC114ES
TR11	ET-353897	TR DTC114ES
TR12	ET-353897	TR DTC114ES
TR13	ET-353897	TR DTC114ES
TR14	ET-308141	TR 2SC2603 G F05
TR15	ET-347961	TR 2SD1012-V G F05
TR16	ET-347961	TR 2SD1012-V G F05
TR17	ET-347961	TR 2SD1012-V G F05
TR18	ET-347961	TR 2SD1012-V G F05
TR19	ET-347961	TR 2SD1012-V G F05
TR20	ET-354415	TR DTA144ES
TR21	ET-308141	TR 2SC2603 G F05
TR22	ET-353897	TR DTC114ES
TR23	ET-353897	TR DTC114ES
TR24	ET-353897	TR DTC114ES
TR25	ET-308141	TR 2SC2603 G F05
TR26	ET-308141	TR 2SC2603 G F05
TR27	ET-354414	TR DTC144ES
TR28	ET-354414	TR DTC144ES
TR29	ET-353897	TR DTC114ES
TR30	ET-308472	TR 2SA1115 E,F,G F05
TR31	ET-373382	TR DTA143ZS
TR32	ET-353897	TR DTC114ES
TR33	ET-353897	TR DTC114ES
TR34	ET-353897	TR DTC114ES
TR35	ET-353897	TR DTC114ES
TR36	ET-353897	TR DTC114ES
TR37	ET-353897	TR DTC114ES
VR1	EV-330531	R S-FIX H TM8KV2-1S 0.50W503
X1	EI-372031	OSC CE W/C FCR8.0MC 8.0MHZ

PARTS LIST

10. SYSTEM CONTROL (2) P.C BOARD

Ref. No.	Part No.	Description
D201	ED-624903	D SILICON H 1S2473
D202	ED-624903	D SILICON H 1S2473
D203	ED-307572	D SILICON H 1SS131
D204	ED-624903	D SILICON H 1S2473
D205	ED-624903	D SILICON H 1S2473
IC201	EI-345765	IC LB1292
IC202	EI-345765	IC LB1292
IC203	EI-337013	IC LB1290
IC204	EI-356327	IC HA12067NT
IN201	EM-373136	IND FL FIP26AW15Y
SW201	ES-373380	SW PUSH ESB-68630 4 THROW N [NR SW]
TR201	ET-360824	TR DTC144EF
TR202	ET-360824	TR DTC144EF
TR203	ET-372030	TR DTA144EF
TR204	ET-372030	TR DTA144EF
TR205	ET-360824	TR DTC144EF
TR206	ET-360824	TR DTC144EF
TS201	ES-373381	SW TACT SKHHPP
TS202	ES-373381	SW TACT SKHHPP
TS203	ES-373381	SW TACT SKHHPP
TS204	ES-373381	SW TACT SKHHPP
TS205	ES-373381	SW TACT SKHHPP
TS206	ES-373381	SW TACT SKHHPP
TS207	ES-373381	SW TACT SKHHPP
TS208	ES-373381	SW TACT SKHHPP
TS209	ES-373381	SW TACT SKHHPP
TS210	ES-373381	SW TACT SKHHPP

11. TIMER SW P.C BOARD

Ref. No.	Part No.	Description
SW301	ES-370965	SW SLIDE SSSU02 1-01-03N [TIMER START SW]

12. REMOCON JACK P.C BOARD

Ref. No.	Part No.	Description
J401	EJ-346076	DIN J TCS4690-01-1111 P 8P [REMOTE]

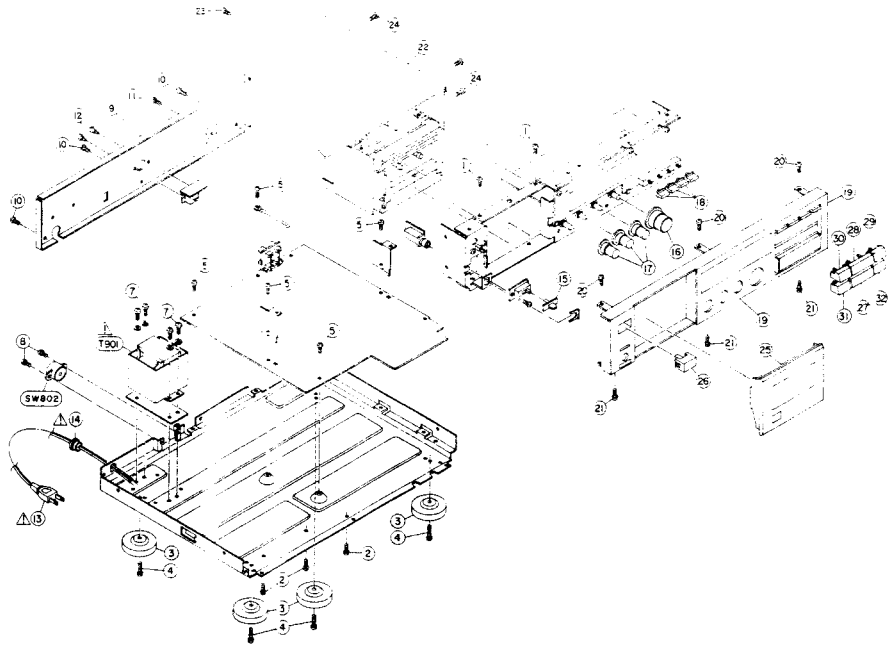
13. MOTOR P.C BOARD

Ref. No.	Part No.	Description
D5	ED-338561	D ZENER H HZ2FA B2 F10
IC1	EI-201940	IC NJM4558S
IC2	EI-201940	IC NJM4558S
IC3	EI-337568	HOLE-E DHD-H070
IC4	EI-337568	HOLE-E DHD-H070
TR1	ET-308977	TR 2SC2274K F F05
TR2	ET-337760	TR 2SA984K F
TR3	ET-308977	TR 2SC2274K F F05
TR4	ET-337760	TR 2SA984K F
VR1	EV-464253	R S-FIX V V8K1-1 0.10W 202
VR2	EV-464253	R S-FIX V V8K1-1 0.10W 202

14. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1	ZS-361242	ST BR26X06STL CMT
2	ZS-345272	ST BR30X06STL BNI
3	SA-B369350A1	FOOT PART
4	ZS-351098	ST BR30X12STL BNI
5	ZS-342001	ST BR30X06STL NI3
6	MZ-553948	WIRE BAND F-100
T901A	*BT-373394	TRANS POWER T2100(U) [U]
T901B	*BT-373395	TRANS POWER T2100(A.C) [A.C]
T901C	*BT-373396	TRANS POWER T2100(E.V) [E.V]
T901D	*BT-373398	TRANS POWER T2100(B.S) [B.S]
7	ZS-322580	ST BID40X08STL BNI
SW802	*ES-359606	SW SELECTOR 8T-41S0454 01-4 [U] [VOLTAGE SELECTOR]
8	ZS-352133	ST BR30X10STL CMT
9A	SP-373338A	PANEL REAR GX-52(U) [U]
9B	SP-373338C	PANEL REAR GX-52(C) [C]
9C	SP-373338D	PANEL REAR GX-52(E) [E]
9D	SP-373338E	PANEL REAR GX-52(B) [B]
10	ZS-345272	ST BR30X06STL BNI
11	ZS-350934	PT BR30X08STL BNI
12	ZW-231030	RV NYL30X045 BL
13A	*EW-383654	AC CORD 200 0129AVFF B300 A U/ [U]
13B	*EW-363617	AC CORD200 0238 SPT1 B300 A UC [C]
13C	*EW-363667	AC CORD 200 0364 LCFL B300 A E [E]
13D	*EW-363679	AC CORD 200 LCFL B300 A B [B]
14	*EZ-330775	CLAMPER CORD 130
15-G	SK-358066E	KNOB SLIDE(4)-GOLD [TIMER START-GOLD]
15-B	SK-358066B	KNOB SLIDE-BLACK [TIMER START-BLACK]
16-G	SK-373334B	KNOB VR(A)-GOLD [REC LEVEL-GOLD]
16-B	SK-373334A	KNOB VR(A)-BLACK [REC LEVEL-BLACK]
17-G	SK-373335B	KNOB VR(B)-GOLD [GOLD]
17-B	SK-373335A	KNOB VR(B)-BLACK [BLACK]
18-G	SK-373340B	KNOB PUSH-GOLD [GOLD]
18-B	SK-373340A	KNOB PUSH-BLACK [BLACK]
19-G	BD-T2100A060A	PANEL FRONT BLK GX-52-G [GOLD]

FINAL ASSEMBLY BLOCK



Ref. No.	Part No.	Description
19-B	BD-T2100A060B	PANEL FRONT BLK GX-52-B [BLACK]
20	ZS-320906	ST BR30X06STL CMT
21	ZS-305827	ST BID30X06STL BNI
22-G	SP-373343B	COVER UPPER-GOLD [GOLD]
22-B	SP-373343A	COVER UPPER-BLACK [BLACK]
23-G	ZS-342001	ST BR30X06STL NI3 [GOLD]
23-B	ZS-345272	ST BR30X06STL BNI [BLACK]
24-G	ZS-341959	ST BID40X06STL NI3 [GOLD]
24-B	ZS-341960	ST BID40X06STL BNI [BLACK]
25-G	BD-T2100A070A	...D PANEL BLK GX-52-G [GOLD]
25-B	BD-T2100A070B	...D PANEL BLK GX-52-B [BLACK]
26-G	SK-373236A	KNOB POWER-GOLD [GOLD]
26-B	SK-373236B	KNOB POWER-BLACK [BLACK]
27-G	SK-373336B	KNOB OPERATION(A) STOP-GOLD [GOLD]
27-B	SK-373336A	KNOB OPERATION(A) STOP-BLACK [BLACK]
28-G	SK-373336D	KNOB OPERATION(A) PLAY-GOLD [GOLD]
28-B	SK-373336C	KNOB OPERATION(A) PLAY-BLACK [BLACK]
29-G	SK-373337B	KNOB OPERATION(B) FF-GOLD [GOLD]
29-B	SK-373337A	KNOB OPERATION(B) FF-BLACK [BLACK]
30-G	SK-373337D	KNOB OPERATION(B) REW-GOLD [GOLD]
30-B	SK-373337C	KNOB OPERATION(B) REW-BLACK [BLACK]
31-G	SK-373337F	KNOB OPERATION(B) PAUSE-GOLD [GOLD]
31-B	SK-373337E	KNOB OPERATION(B) PAUSE-BLACK [BLACK]
32-G	SK-373337H	KNOB OPERATION(B) MUTE-GOLD [GOLD]
32-B	SK-373337G	KNOB OPERATION(B) MUTE-BLACK [BLACK]

NOTE: SYMBOL FOR COLOR VALIATION
B: BLACK
G: GOLD

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BB-T2100A020A	1	ED-330622	D564	EI-345765	IC202	ET-308472	TR407
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BD-T2100A060B	19-B	ED-330622	D566	EI-346071	IC301	ET-308472	TR30
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ED-306010	D557	ED-624903	D201	EQ-373483	T402	ET-349081	TR501
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NOTE

ABBREVIATIONS FOR SERVICE MANUAL (CASSETTE)

Abbreviation	Explanation	Abbreviation	Explanation
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi PleX
AR	Anti Recording	NC	Not Connected (No Connection)
AT BIAS	Auto Tuning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPsTan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord (RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF (or F.FWD)	Fast Forward	SIG	SIGnal
FLD	FLuorescent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLTage
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitining Diode	X'TAL	cysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed

AKAI

MODEL GX-52

SCHEMATIC DIAGRAM AND PC BOARDS

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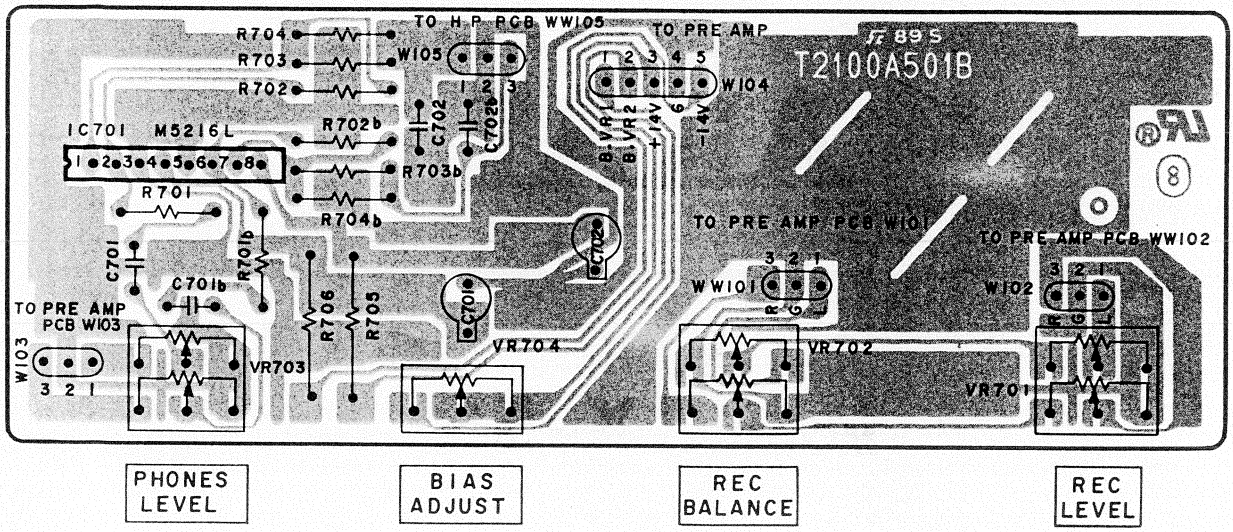
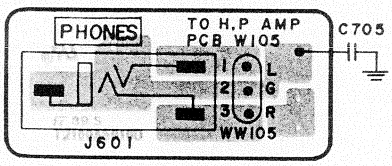
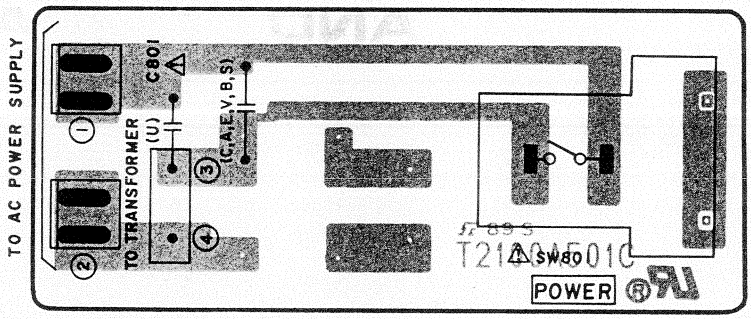
HEAD PHONE AMP PCB T2100A501B

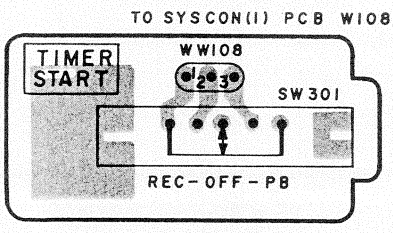




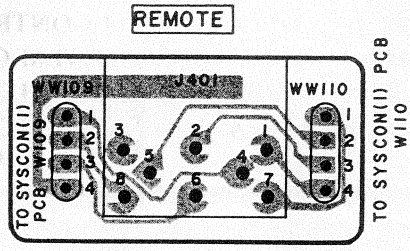
HEAD PHONE PCB
T2100A501D



POWER TRANS PCB T2100A501C



TIMER SW PCB
T2100A502C



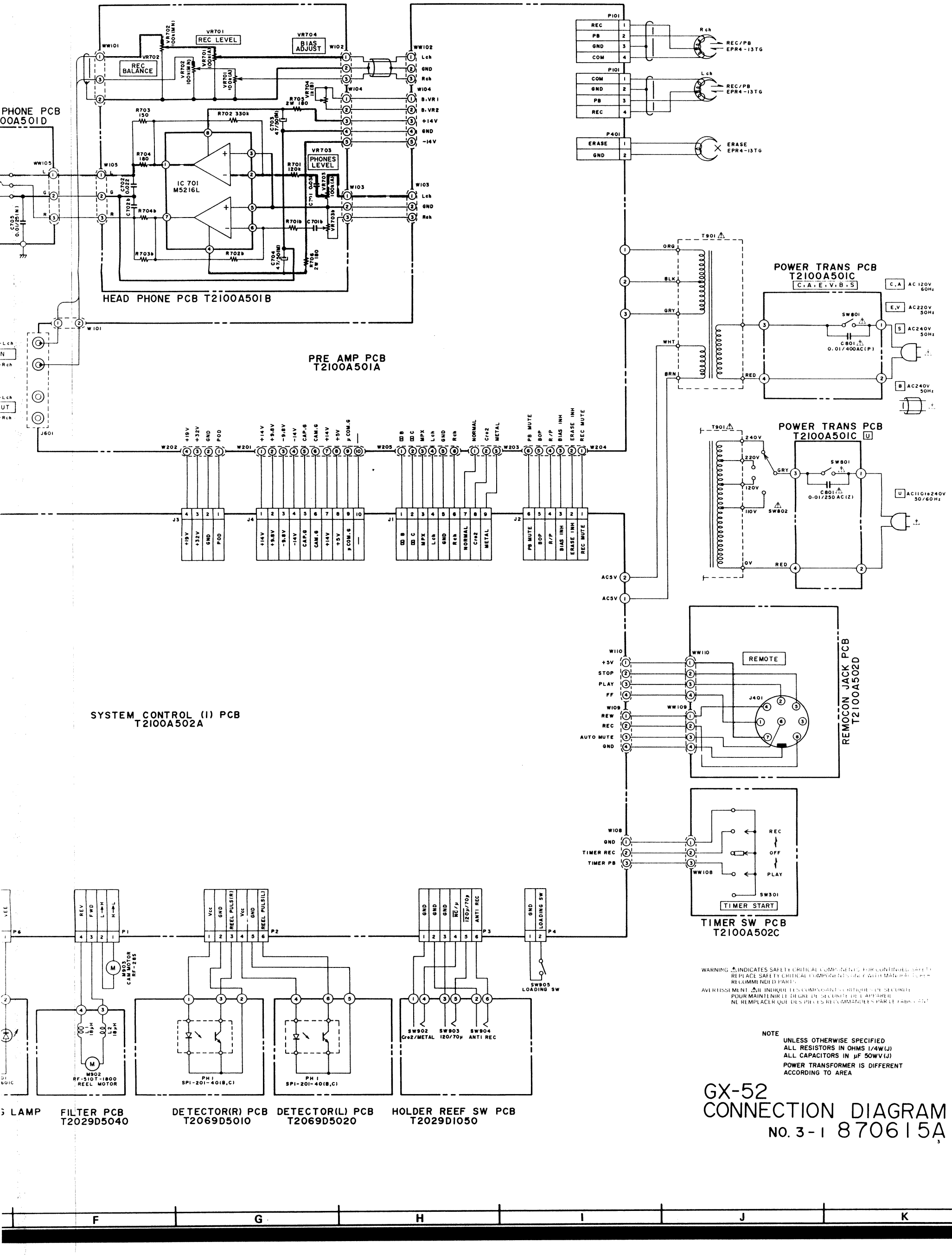
REMOCON JACK PCB
T2100A502D

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

GX-52

MOTOR PCB
M3103C726A
POTENTION PCB
M3103C726B
VR901 (10kB)
GND
+9.8V
VR
GND
H.IN
-14V
-14V
M901
CAPSTAN MOTOR
BLM-300
FG
FG PCB
M3103C7130
HEAD PHONE PCB
T2100A501D
WW101
VR702
REC BALANCE
VR702 100k(MIN)
VR701 100k(A)
R703 150
R704 180
IC 701
M5216L
C702
C705 0.01μ(MIN)
R704b
R703b
WW105
W105
J701
L
G
R
HEAD PHONE PCB T21
W101
LINE IN
LINE OUT
Lch
Rch
J601
W202
+19V
+32V
GND
SYSTEM CONTROL (2) PCB
T2100A502B
WW105
GND
MEMORY
REC CANCEL
IPSS
AUTO MUTE
REC
REW
FF
PLAY
STOP
COUNTER RESET
WW106
W106
W105
P5
WW107
B
C
MPX
W107
WW102
SEG.d
SEG.e
DIG.2
SEG.g
SEG.f
DIG.3
SEG.h
DIG.4
W102
WW104
PLAY
MB
MA
W104
WW101
AC5V
+19V
+32V
SEG.a
SEG.b
SEG.c
DIG.1
W101
WW103
METAL
Cr02
NORMAL
METER(L)
METER(R)
W103
P6
P1
GND
VEE
REV
FWD
L→H
H→L
Vcc
M903
CAM MOTOR
RF-285
D901
SLF-601C
L1
L2
18μH
M902
RF-510T-1800
REEL MOTOR
PH1
SPI-201-40
B(POWER SUPPLY) LINE
REC SIGNAL LINE
P.B SIGNAL LINE
SYSTEM CONTROL (1)
T2100A502A
HOUSING LAMP
FILTER PCB
T2029D5040
DETECTO
T2069



WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MATSUSHITA RECOMMENDED PARTS.

AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT

NOTE

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

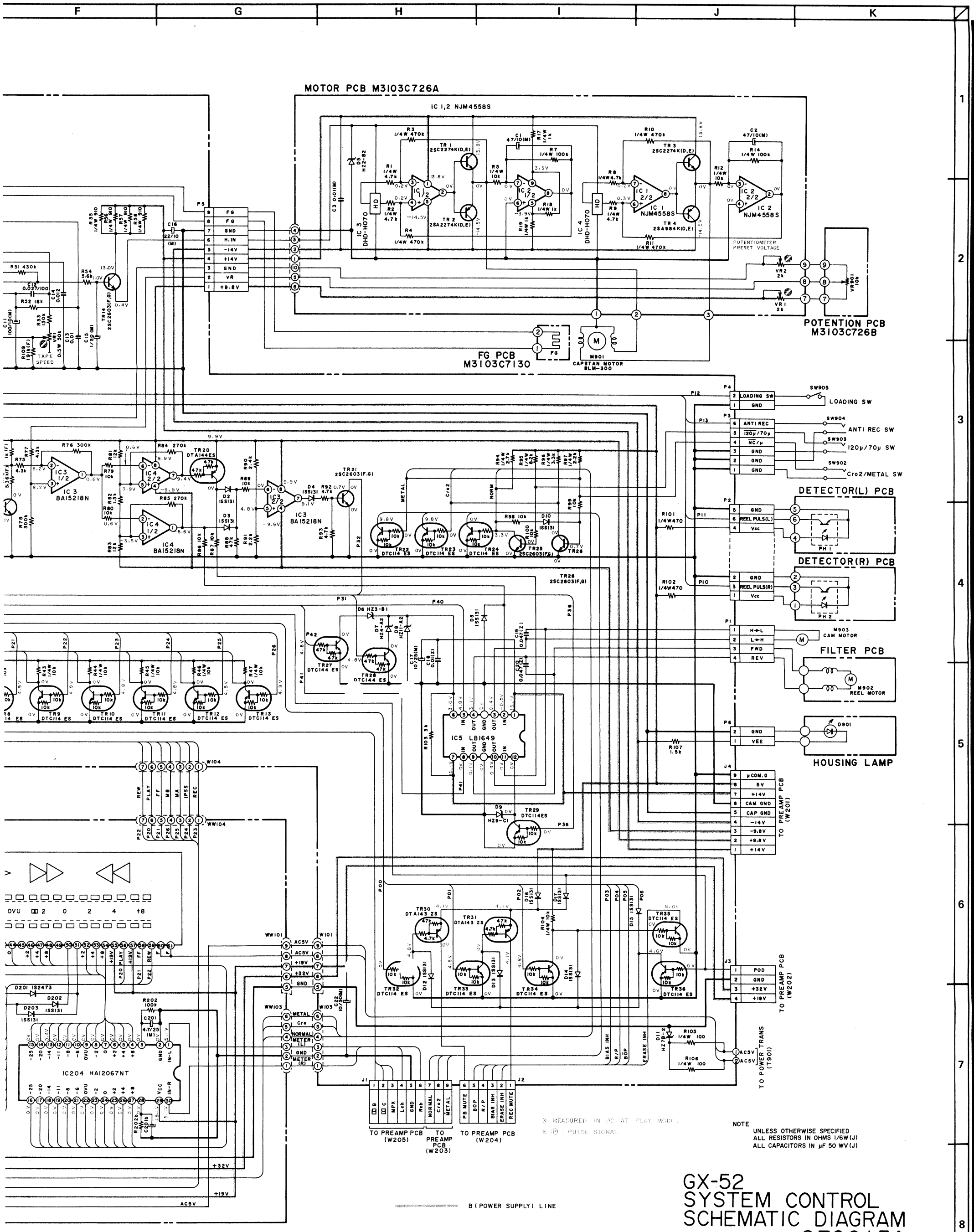
GX-52 CONNECTION DIAGRAM

NO. 3-1 870615A 3

GX-52

SYSTEM CONTROL (1) PCB T2100A502A

SYSTEM CONTROL(2) PCB T2100A502B



GX-52
SYSTEM CONTROL SCHEMATIC DIAGRAM
NO. 3-2 870613A 3

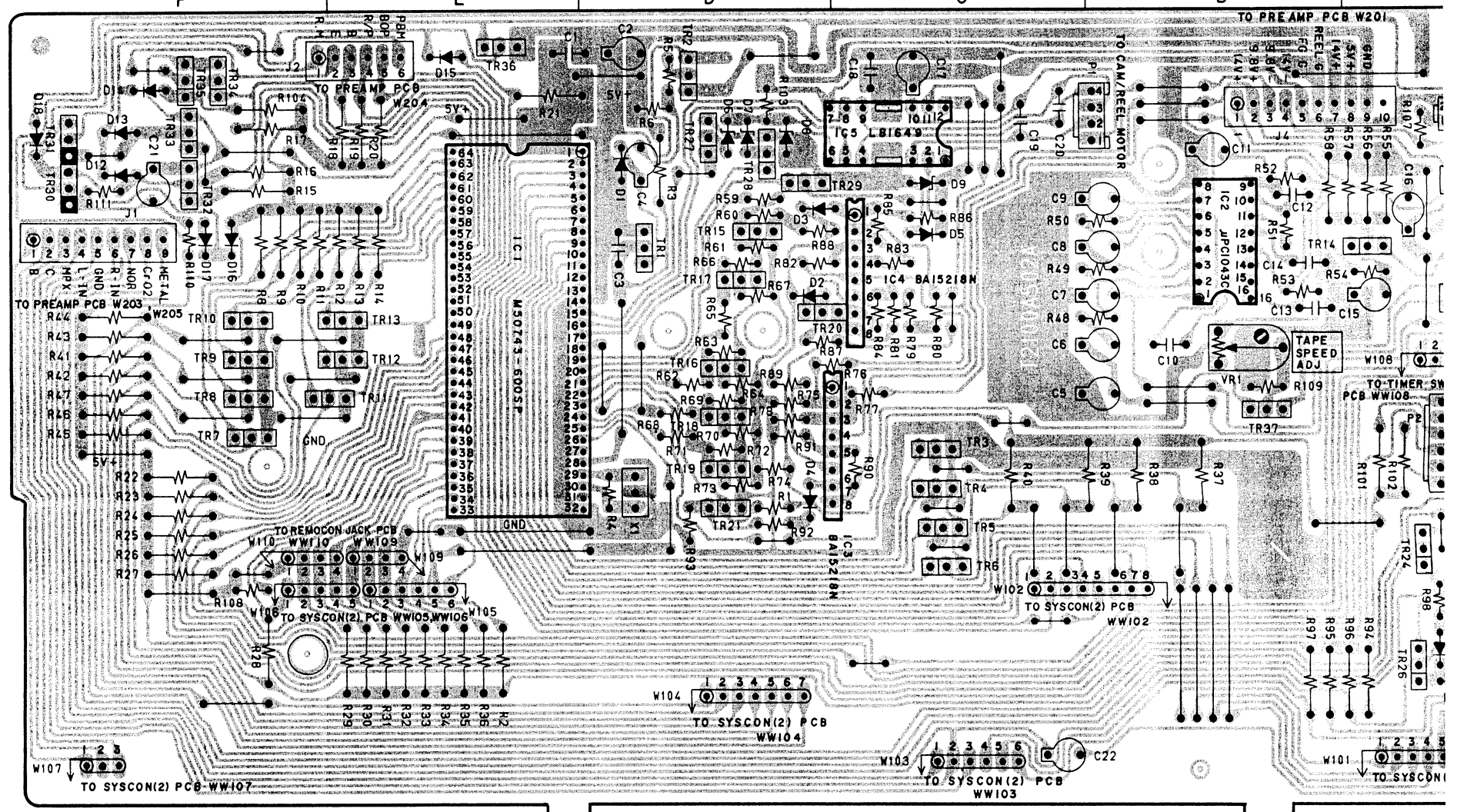
LOCATION OF COMPONENTS

IC
IC1 . . . . . E2
IC2 . . . . . B1
IC3 . . . . . D2
IC4 . . . . . C2
IC5 . . . . . C1

TRANSISTOR
TR1. . . . . D2
TR2. . . . . D1
TR3. . . . . C2
TR4. . . . . C2
TR5. . . . . C3
TR6. . . . . C3
TR7. . . . . F2
TR8. . . . . F2
TR9. . . . . F2
TR10. . . . . F2
TR11. . . . . E2
TR12. . . . . E2
TR13. . . . . E2
TR14. . . . . A1
TR15. . . . . D1
TR16. . . . . D2
TR17. . . . . D2
TR18. . . . . D2
TR19. . . . . D2
TR20. . . . . D2
TR21. . . . . D2
TR22. . . . . A3
TR23. . . . . A3
TR24. . . . . A3
TR25. . . . . A3
TR26. . . . . A3
TR27. . . . . D1
TR28. . . . . D1
TR29. . . . . D1
TR30. . . . . F1
TR31. . . . . F1
TR32. . . . . F1
TR33. . . . . F1
TR34. . . . . F1
TR35. . . . . F1
TR36. . . . . F1
TR37. . . . . B2

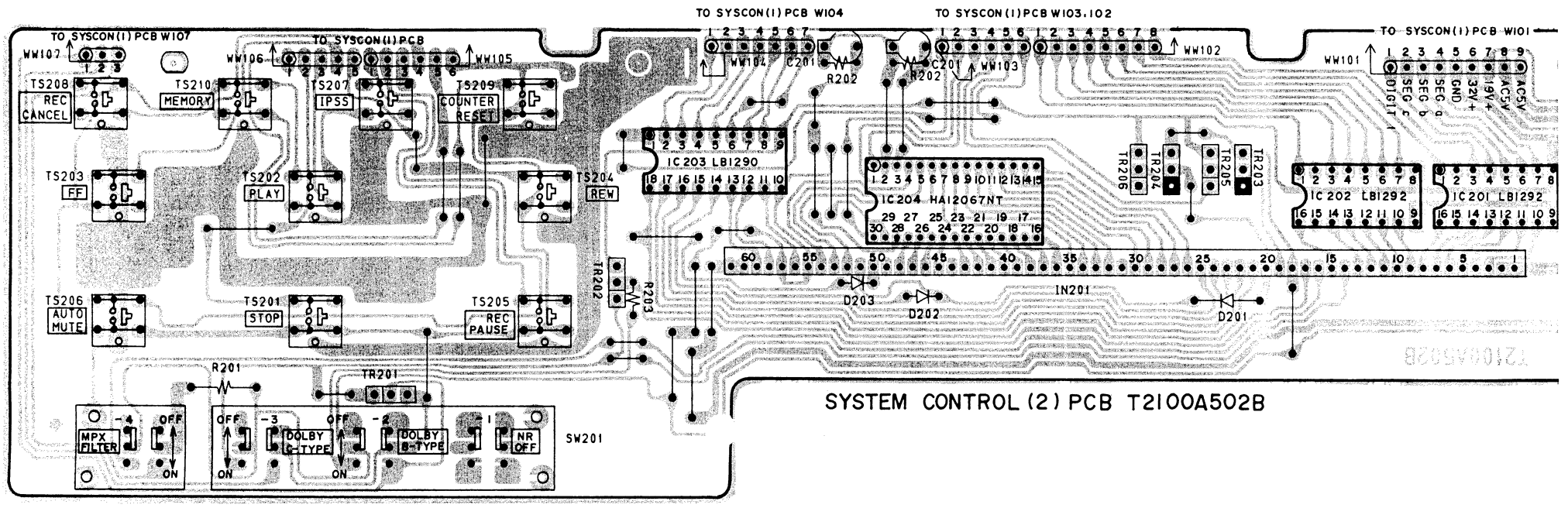
CONNECTOR
W101. . . . A3 P1---- B1
W102. . . . B3 P2---- A2
W103. . . . C3 P3---- A2
W104. . . . D3 P4---- A2
W105. . . . E3 P5---- A1
W106. . . . F3
W107. . . . F3
W108. . . . A2
W109. . . . E3
W110. . . . F3
J1. . . . . F2
J2. . . . . F1

2SC2603. . TR14, TR21, TR25, TR26
2SD1012. . TR15, TR16, TR17, TR18, TR19
DTC144 . . TR1, TR2, TR20, TR27, TR28
DTC114 . . TR3, TR4, TR5, TR6, TR7, TR8, TR9, TR10, TR11, TR12, TR13, TR22, TR23, TR24, TR29, TR32, TR33, TR34, TR35, TR36, TR37
DTA143 . . TR30, TR31



B
= NPN TRANSISTOR
B
= PNP TRANSISTOR

E C B
2SC2603
2SD1012
DTC144
DTC114
DTA143



LDCATION OF COMPONENTs

ICs
IC201....A1
IC202....A1
IC203....D1
IC204....C1

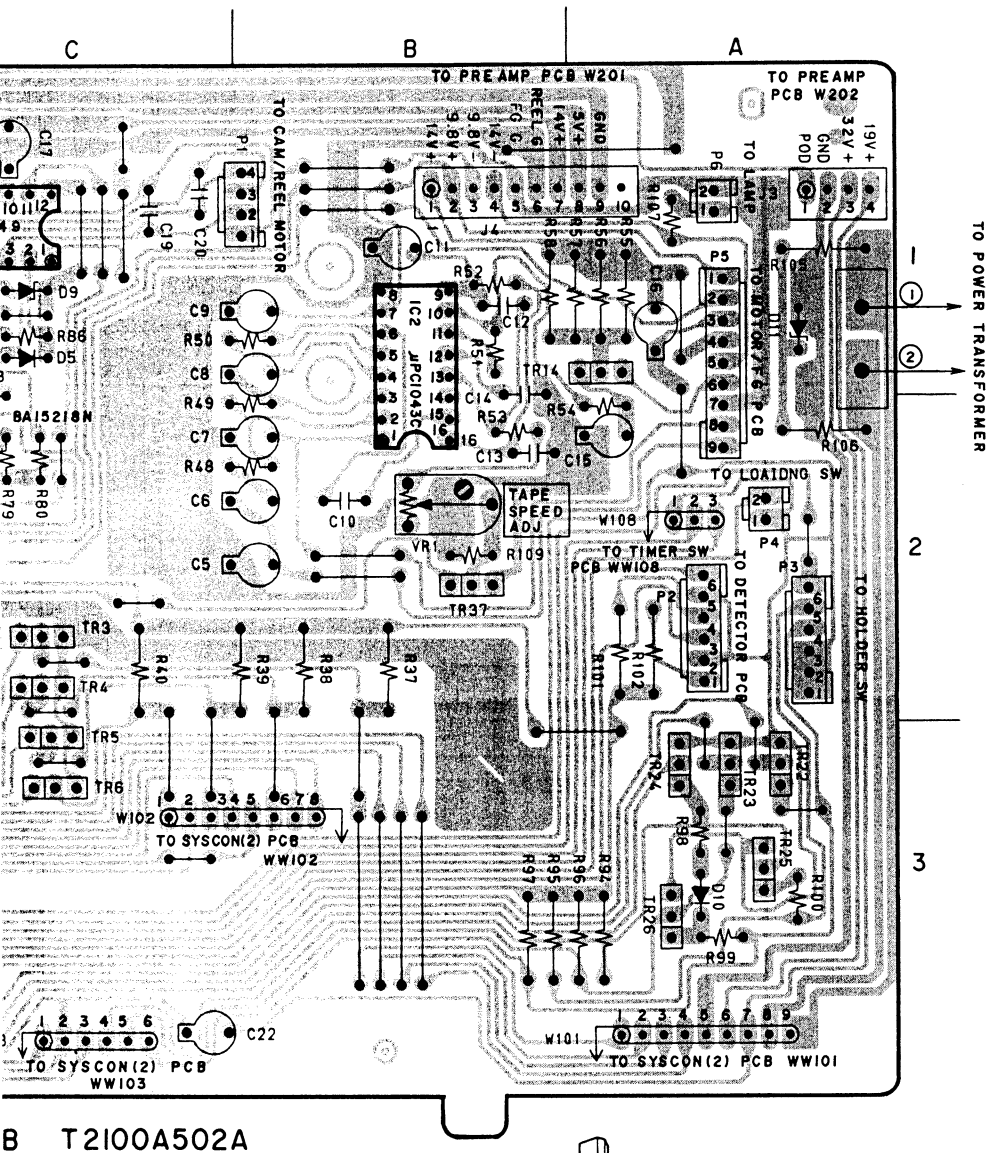
TRANSISTORs
TR201....E2
TR202....D2
TR203....B1
TR204....B1
TR205....B1
TR206....B1

CONNECTORs
WW101....A1
WW102....B1
WW103....C1
WW104....D1
WW105....E1
WW106....F1
WW107....F1

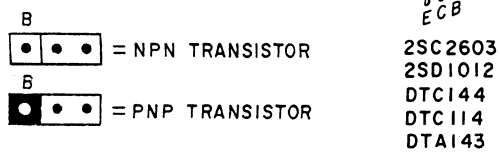
DTC144....TR201,TR202,TR205
TR206
DTA144....TR203,TR204

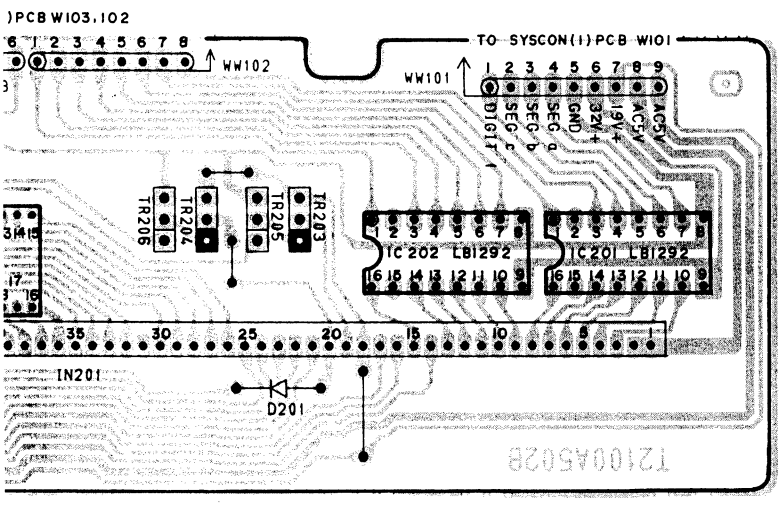
B C E
= NPN TRANSISTOR
B C E
= PNP TRANSISTOR

E C B
DTC144
DTA144



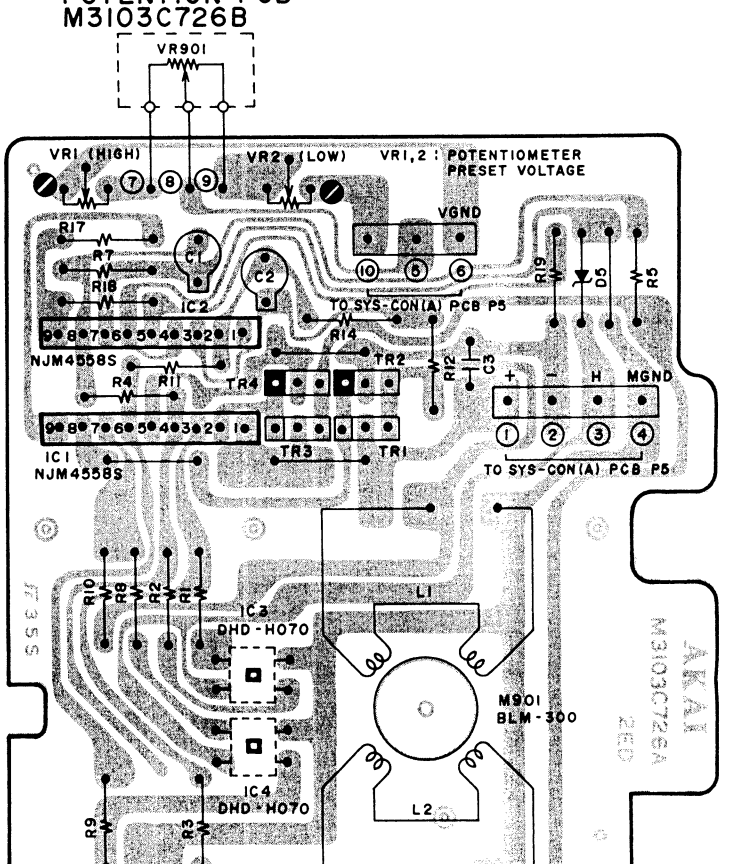
B T2100A502A





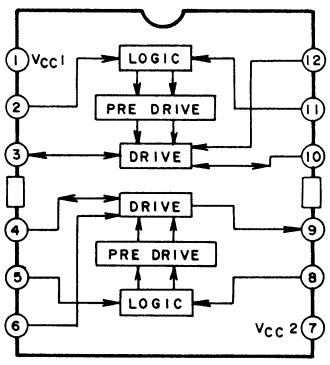
(2) PCB T2100A502B

POTENTION PCB
M3103C726B

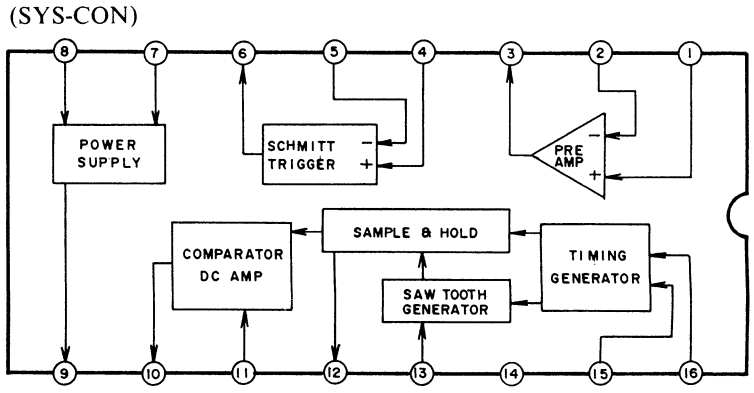


MOTOR PCB M3103C726A

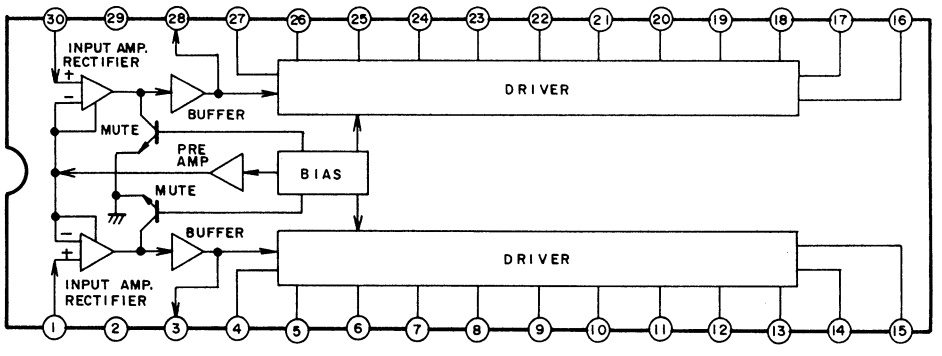
LB1649
(SYS-CON)



μPC1043C
(SYS-CON)



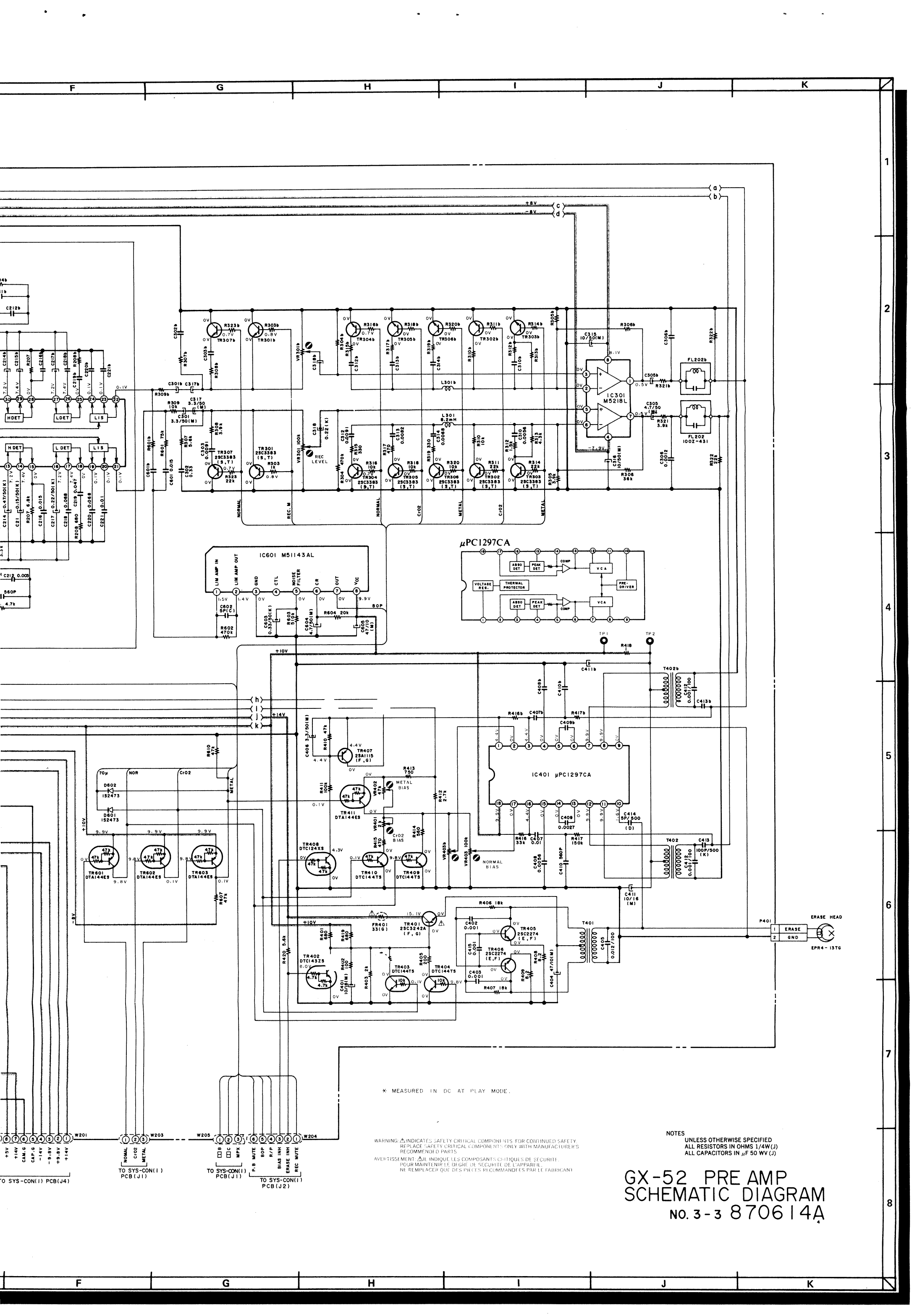
HA12067NT
(SYS-CON)



GX-52

*	U	C,A	E,V,S,B
F1, F2	250V 800mA	125V 800mA	250V T500mA

*	U	C,A	E,V,S,B
F3, F4	250V 1.25A	125V 1.25A	250V T800mA



* MEASURED IN DC AT PLAY MODE.

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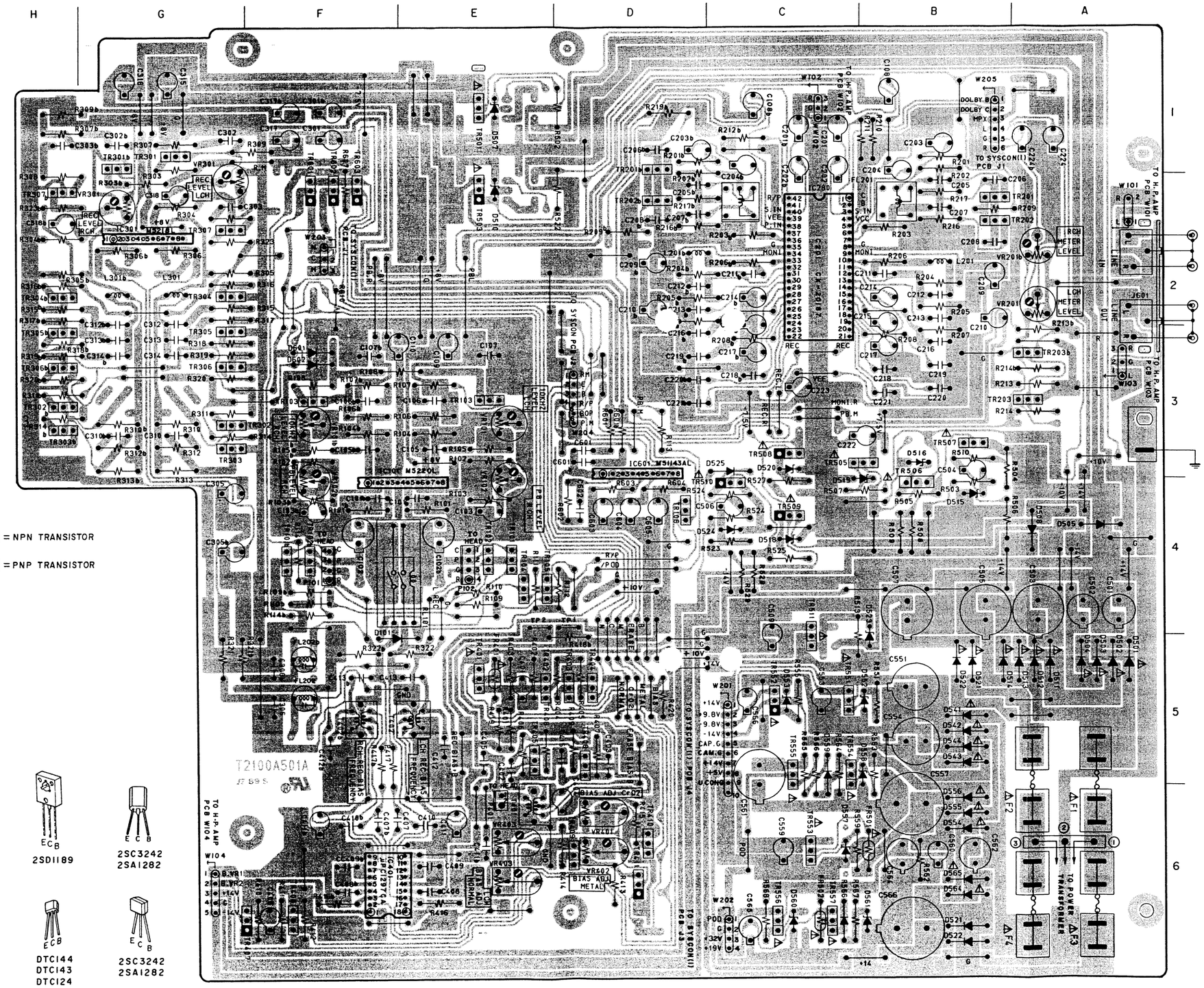
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

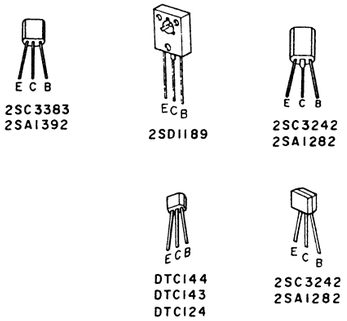
NOTES
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV (J)

GX-52 PRE AMP SCHEMATIC DIAGRAM NO. 3-3 870614A



= NPN TRANSISTOR

= PNP TRANSISTOR



PRE AMP PCB T2100A501A

LOCATION OF COMPONENTS

IC
IC101. . . . E4
IC201. . . . C2
IC301. . . . G2
IC401. . . . E6
IC601. . . . D3

TRANSISTOR
TR101 . . . E4
TR101 . . . F4
TR102 . . . E4
TR102 . . . F4
TR103 . . . E3
TR103 . . . F3
TR104 . . . E4
TR105 . . . E4
TR106 . . . D4
TR201 . . . B2
TR201 . . . D1
TR202 . . . B2
TR202 . . . D2
TR203 . . . A3
TR203 . . . A3
TR301 . . . G1
TR301 . . . G1
TR302 . . . G3
TR302 . . . H3
TR303 . . . G3
TR303 . . . H3
TR304 . . . G2
TR304 . . . H2
TR305 . . . H3
TR306 . . . G3
TR306 . . . H3
TR307 . . . G2
TR307 . . . H2
TR401 . . . E5
TR402 . . . E5
TR403 . . . D5
TR404 . . . D5
TR405 . . . E5
TR406 . . . D5
TR407 . . . G6
TR408 . . . F6
TR409 . . . D6
TR410 . . . D6
TR411 . . . D6
TR501 . . . E1
TR502 . . . E1
TR503 . . . E2
TR504 . . . E2
TR505 . . . B3
TR506 . . . B3
TR507 . . . B3
TR508 . . . C3
TR509 . . . C4
TR510 . . . C4
TR511 . . . C5
TR551 . . . C5
TR552 . . . C5
TR553 . . . C6
TR554 . . . C5
TR555 . . . C5
TR556 . . . C6
TR557 . . . C6
TR601 . . . F2
TR602 . . . F2
TR603 . . . F2

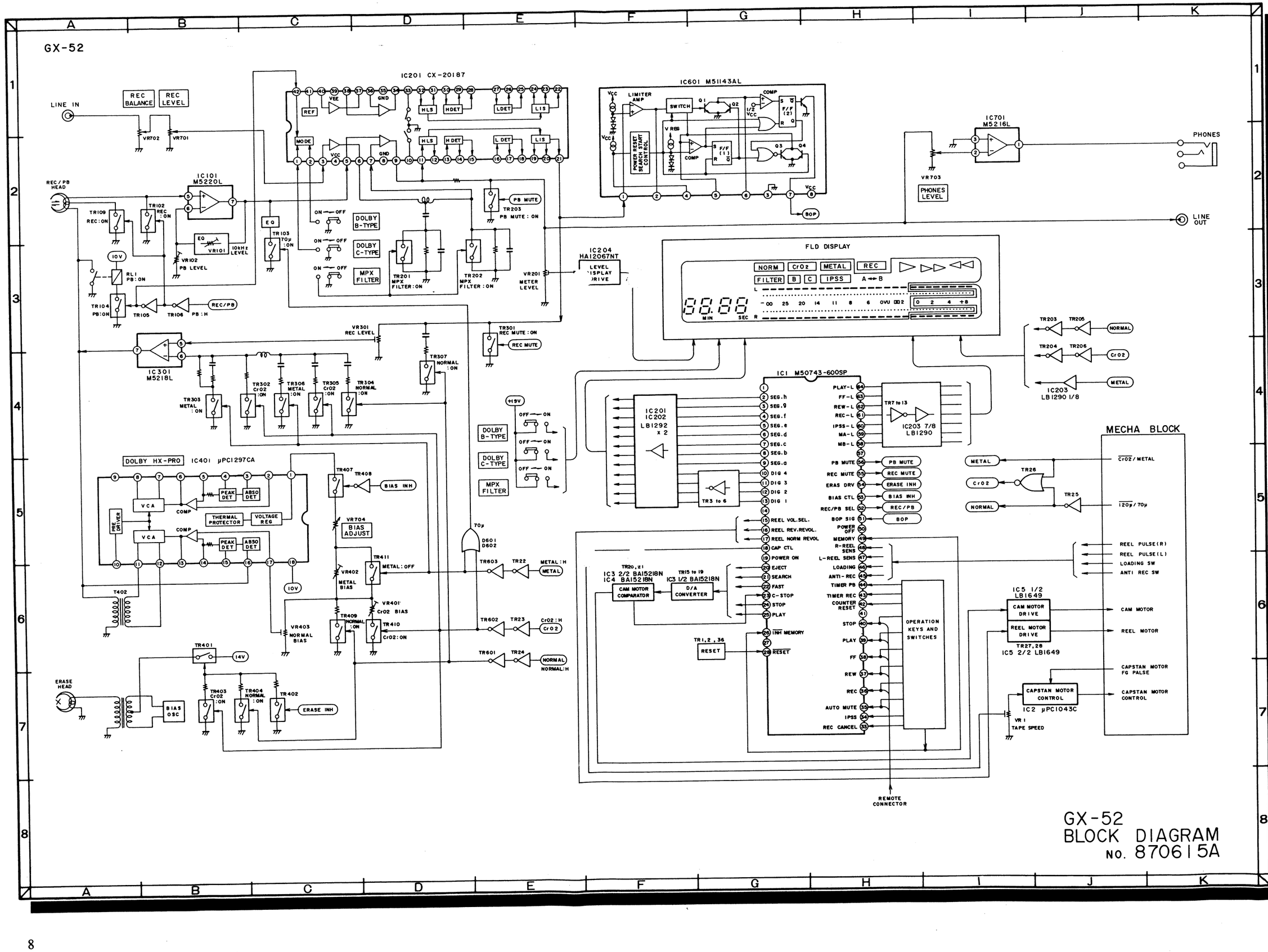
CONNECTOR
W101. . . . A2
W102. . . . C1
W103. . . . A3
W104. . . . G6
W201. . . . C5
W202. . . . C6
W203. . . . F2
W204. . . . D3
W205. . . . B1
P101 . . . . F4
P102 . . . . E4

2SC3383. . TR101, TR102, TR103, TR201, TR202, TR203, TR301, TR302, TR303, TR304, TR305, TR306, TR307, TR501, TR504, TR505, TR506, TR507
2SC3242. . TR401, TR511, TR551, TR557
2SC2274. . TR405, TR406
2SC2603. . TR554, TR556
2SA1392. . TR502, TR503, TR508, TR509, TR510
2SA1115. . TR407, TR555
2SA1282. . TR552
2SD1189. . TR553
DTC144 . . TR403, TR404, TR409, TR410, TR412
DTC143 . . TR402
DTC124 . . TR408
DTC123 . . TR104
DTC114 . . TR105, TR106
DTA144 . . TR411, TR601, TR602, TR603

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

GX-52



GX-52
BLOCK DIAGRAM
No. 870615A